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FREE-RIDING, COOPERATION, AND "PEACEFUL REVOLUTIONS" IN COPYRIGHT

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I. INTRODUCTION

In 1999, the controversy over Napster changed copyright forever. When Metallica sued to stop what it called an "insidious and ongoing thievery scheme,"[1] the band started a fierce battle between the music and film industries and their consumers. Seemingly overnight, fans became selfish "free-riders"[2] with "the moral fiber of common looters."[3] For the last fifteen years, society has perceived the future of our creative industries as dependent upon stopping free-riders, but the war against free-riding is not going well. Surge after surge has failed to keep "pirates" from looting, filching, and stealing digital copies of music, films, and books.[4] A recent industry report estimates that just under thirty percent of Internet users are engaged in infringement, up by thirty-seven percent in fifteen months.[5] The same figures suggest that infringing content now makes up 23.8% of all Internet traffic in North America, Europe, and the Asia-Pacific region.[6] Copyright is now facing a crisis: A large proportion of ordinary consumers apparently have little respect for the law or the artists they are ripping off.

It turns out, however, that much of what we know about copyright and free-riders is wrong. In many cases, the free-riding fans who download illicit content are also some of the content industries' biggest customers.[7] More importantly, it turns out that fans often really

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1. STEVEN M. GILLON, THE AMERICAN PARADOX: A HISTORY OF THE UNITED STATES SINCE 1945 381 (3d ed. 2013); Lee Marshall, *Metallica and Morality: The Rhetorical Battleground of the Napster Wars*, 1 ENT. L. 1, 12 (2002).

2. For a discussion on how the rhetoric of "free-riding," obtaining content without paying, has been used to denote infringement in intellectual property, see Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1032–46 (2004).

3. *See* LEE MARSHALL, BOOTLEGGING: ROMANTICISM AND COPYRIGHT IN THE MUSIC INDUSTRY 85 (2005).

4. *See* JESSICA REYMAN, THE RHETORIC OF INTELLECTUAL PROPERTY: COPYRIGHT LAW AND THE REGULATION OF DIGITAL CULTURE 63 (2010) (discussing "the introduction of the character of the pirate into the copyright story").

5. David Price, *NetNames Piracy Analysis: Sizing the Piracy Universe*, NETNAMES 8 (Sept. 2013), http://www.netnames.com/digital-piracy-sizing-piracy-universe.

6. *Id.* at 3.

7. *See, e.g.*, Enigmax, *Suppressed Report Found Busted Pirate Site Users Were Good Consumers*, TORRENTFREAK (July 19, 2011), https://torrentfreak.com/suppressed-report-found-busted-pirate-site-users-were-good-consumers-110719/ (reporting results of a study by Society for Consumer Research); Ernesto, *Pirates Are the Music Industry's Most Valuable Customers*, TORRENTFREAK (Jan. 22, 2010), https://torrentfreak.com/pirates-are-the-music-industrys-most-valuable-customers-100122/ (reporting results of a lobbying group study showing that music sharers are more likely to purchase digital music); Joe Karaganis, *HADOPI Says: Let's Try Cutting off Nose To Spite Face*, THE AMERICAN ASSEMBLY (July 26, 2011), http://piracy.americanassembly.org/hadopi-says-lets-try-cutting-off-nose-to-spite-face/ (reporting on results from a study of French users by the HADOPI copyright enforcement authority showing that approximately two thirds of high-volume purchasers

want to support the artists they love. When Radiohead famously released their 2007 album, *In Rainbows*, as a digital download for any price, their fans chose to pay a total of approximately $3 million.[8] Since then, a series of experiments with pay-what-you-want ("PWYW") pricing in many different creative industries has reliably shown that when given the choice of what to pay, audiences will often pay more than the minimum amount to access creative works. The independent game developer 2D Boy raised over $100,000 in two weeks by making its game, *World of Goo*, available for whatever price people wanted to pay.[9] Semaphore Press showed that, given a choice, eighty-three percent of law students chose to pay for casebooks, and eighty-seven percent of those paid the suggested price.[10] Nearly 25,000 of Amanda Palmer's fans paid just under $1.2 million in aggregate for her latest album before it was even produced; the album continues to be available on her website as a PWYW download under a Creative Commons license.[11] Over the last few years, millions of consumers have chosen to pay over $65 million for games offered by Humble Bundle on PWYW terms.[12] Institutions, too, are often willing to pay for access when they could otherwise free-ride. CERN, for example, is bringing together over one thousand libraries to voluntarily pay the costs of making physics research accessible to every-

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also acknowledge illicit file-sharing). Note that the more complex question about the aggregate effect of file-sharing on copyright industry revenues remains contested.

8. Andrew Lipsman, *For Radiohead Fans, Does "Free" + "Download" = "Freeload"?*, COMSCORE (Nov. 5, 2007), http://www.comscore.com/Insights/Press_Releases/2007/11/Radiohead_Downloads; *David Byrne and Thom Yorke on the Real Value of Music*, WIRED MAGAZINE (Dec. 18, 2007), http://www.wired.com/entertainment/music/magazine/16-01/ff_yorke?currentPage=all; Andrew Lipsman, *For Those of You Wondering About comScore's Radiohead Study* . . . , COMSCORE (Nov. 8, 2007), https://www.comscore.com/ita/Insights/Blog/For_those_of_you_wondering_about_comScore_s_Radiohead_study.

9. John Walker, *World of Goo Sale Offers Fascinating Results*, ROCK, PAPER, SHOTGUN (Oct. 20, 2009, 12:58 PM), http://www.rockpapershotgun.com/2009/10/20/world-of-goo-sale-provides-fascinating-results/.

10. Lydia Pallas Loren, *The Viability of the $30 (or Less) Casebook* 14 (Lewis & Clark L. Sch. Legal Res. Paper Series, Paper No. 2013-19, 2013), *available at* http://papers.ssrn.com/abstract=2268057.

11. *See* Amanda Palmer, *Amanda Palmer: The New Record, Art Book, and Tour*, KICKSTARTER, http://www.kickstarter.com/projects/amandapalmer/amanda-palmer-the-new-record-art-book-and-tour (last visited Dec. 18, 2014); Amanda Palmer, *Theatre Is Evil Digital*, AMANDAPALMER.NET, http://amandapalmer.net/products/theatre-is-evil-digital/ [hearinafter Palmer, *Theatre*] (last visited Dec. 18, 2014). Creative Commons provides simple, easy to use copyright licensing options which allow content creators to easily identify and broadcast their chosen rights; for example, Amanda Palmer licensed her album under an Attribution NonCommercial ShareAlike license which allows non-commercial reuse of the album provided that Palmer is credited and any resulting work is shared under the same license. *See id.*; *Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)*, CREATIVE COMMONS, http://creativecommons.org/licenses/by-nc-sa/4.0/ (last visited Dec. 18, 2014).

12. *Prior Bundle Statistics*, HUMBLE BUNDLE, https://web.archive.org/web/20140216191747/http://support.humblebundle.com/customer/portal/articles/281031-prior-bundle-statistics (last visited Dec. 18, 2014) (accessed through the Internet Archive index).

one,[13] and a similar project, Knowledge Unlatched, has signed up nearly 300 libraries to pay the costs of publishing open access books that are free to the world.[14]

The success of these experiments shakes the very foundations of copyright theory. Copyright provides a mechanism for professional producers of creative works to exclude free-riders and recoup their costs through sales and licensing. Copyright economics is fundamentally built on the assumption that consumers will avoid paying for access if they can. In this Article, I argue that this outdated model of the consumer as a self-interested rational actor reflects only a small part of human motivation. While consumers of creative works will often free-ride, they also very often choose not to, when they are given the choice. In fact, a large body of evidence from behavioral economics and the social sciences demonstrates that people are motivated to pay, not only because of their own self-interest, but also because of personal morality and social norms of fairness and reciprocity. Studies have shown that, across many different cultures, about fifty percent of people behave as "conditional cooperators." That is, they are generally willing to contribute to a public good if others do as well.[15] Only about a third of the population acts as the rational, self-interested, wealth-maximizing free-riders that copyright theory assumes.[16]

This insight has two profound implications. First, it suggests that current policy and industry approaches to the copyright crisis brought about by the Internet are deeply flawed. While modern copyright reform debates typically focus on deterring self-interested free-riders, that focus ignores the real problem: copyright is losing its normative legitimacy.[17] If people are largely motivated by fairness, the perceived inability of copyright law and business models to provide fair outcomes for artists or consumers is devastating. Surprisingly, the key to winning the war on piracy is not continuing to ratchet up the strength of copyright penalties, but instead increasing the fairness of the system.

The second implication is more radical. I argue that the focus on free-riders in copyright is fundamentally misplaced. Because we care

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13. *See* S. BIANCO ET AL., TOWARDS OPEN ACCESS PUBLISHING IN HIGH ENERGY PHYSICS: REPORT OF THE SCOAP^3 WORKING PARTY (CERN 2007), http://scoap3.org/files/Scoap3WPReport.pdf.

14. Press Release, Knowledge Unlatched, Knowledge Unlatched Pilot Collection to Become Open Access (Mar. 10, 2014), http://www.knowledgeunlatched.org/wp-content/uploads/2014/03/Pilot_Press_Release_10Mar2014.pdf.

15. *See* Ernst Fehr & Herbert Gintis, *Human Motivation and Social Cooperation: Experimental and Analytical Foundations*, 33 ANN. REV. SOC. 43, 50 (2007).

16. *Id.*

17. *See generally* Paula Dootson & Nicolas Suzor, *The Game of Clones and the Australia Tax: Divergent Views About Copyright Business Models and the Willingness of Australian Consumers To Infringe*, U.N.S.W. L.J. (forthcoming 2015), http://eprints.qut.edu.au/75933/ (last visited Dec. 18, 2014) (discussing the attitudes of consumers to copyright and providing qualitative evidence of a significant gap between the law and social norms).

about efficiency, fairness to authors, and the flow of knowledge and culture, we should actually encourage free-riding where possible. Copyright, to borrow a phrase, is the worst system for coordinating cultural production — except for all the other systems that have been tried. The insight that people will often voluntarily cooperate in funding public goods suggests that new systems might be able to support professional production in the creative industries without the great social costs that copyright imposes. I argue that we should reorient copyright theory, policy, and practice to the task of developing sustainable systems that fund creative cultural production without excluding free-riders. Ultimately, copyright should focus less on the *proportion* of people who free-ride, and more on the absolute *number* of people who choose to pay.

In this Article, I explain how producers can leverage both economic incentives and social norms to fund professional cultural production without excluding free-riders. These "peaceful revolutions" restructure copyright markets into cooperative systems based on "negotiation, consent, and self-interest."[18] In doing so, they represent an alternative system of coordinating creative production that is both more efficient and more suited to developing a "just and attractive"[19] culture than the current copyright system. Because these alternate systems provide a means to support the creative industries without exclusivity, they enable much greater distribution and reuse of creative works, greatly reducing the social costs of traditional copyright systems. For this same reason, they also enable greater access to knowledge and cultural goods — prerequisites to the learning, self-expression, and play that humans rely on to flourish.

More work is required to understand the limits and implications of the cooperative systems that coordinate cultural production. The experiments that have been attempted so far provide ample proof of concept for the proposition that these models can be successful.[20] There is sufficient evidence to suggest that these systems can operate to routinely support a diverse range of professional production across a variety of creative industries. I show how producers can employ three structural mechanisms to increase levels of cooperation in these circumstances: (1) providing alternate incentives and reward structures; (2) insulating cooperators from exploitation by free-riders; and (3) developing institutions that facilitate the development and enforcement of cooperative social norms amongst relatively stable groups of participants. Finally, I conclude by mapping out two new

18. PETER SUBER, OPEN ACCESS 146 (2012) (discussing consortia for funding open access publishing and coining the term "peaceful revolution").

19. William Fisher, *Theories of Intellectual Property*, *in* NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 168, 172 (Stephen R. Munzer ed., 2001).

20. *See infra* the experiments discussed in Part III of this Article.

avenues for important future research: the first designed to understand more precisely when these systems are viable and the second to investigate their long-run impact by considering these modes of production as complex systems within the creative industries ecosystem.

The success of alternate systems at coordinating production in the professional core of the creative industries should prompt us to reconsider some of the fundamental principles of copyright. In order to maximize the efficiency of the digital economy and opportunities for individuals to learn and to participate in culture, these alternate systems should be encouraged within the situations and industries in which they are viable. The important policy point is that copyright and public subsidies do not represent the only methods for coordinating cultural production. While alternate systems can coexist with conventional systems, support of a varied innovation economy will emphasize different systems of cultural production in different circumstances. Identifying what these circumstances are is now both a key opportunity and a key challenge for copyright policy.

Part I of this Article explains the foundational role that free-riders play in the basic justification for copyright law. Part II introduces a series of PWYW experiments in the creative industries and demonstrates that consumers often choose not to free-ride. I provide four categories of social motivations that explain why people pay: (1) norms of pride, shame, and fairness; (2) concern for the welfare of third parties; (3) desire to reciprocate in kind; and (4) moral commitments to alternate systems that enable more desirable outcomes. Part III argues that the mainstream focus on deterrence in copyright, the increased gap between law and practice, and the perceived failure of copyright to provide fair outcomes for either artists or consumers are all likely to dampen consumer reciprocity and encourage free-riding. Part IV canvasses a series of experiments where producers in the creative industries have attempted to use both incentives and reciprocity norms to fund the production of openly licensed goods (works that are free to copy, distribute, and remix by the public at large). While these forms of cooperative approaches are still relatively rare, they suggest that the range of systems for encouraging cultural production is much broader than is commonly assumed. Part V sets out the hypothesis that these "commons-based" systems of production can be more efficient and more conducive to human flourishing than conventional copyright systems. Finally, I show why there is good reason to think this hypothesis is true, and outline new research methodologies that will enable it to be tested.

A. Method

The research in this Article synthesizes existing studies of alternate copyright business models through a novel conceptual lens. I have supplemented the existing theoretical and empirical base with additional case studies of experiments with PWYW pricing in cultural production. In order to examine how norms around paying and free-riding are constructed and contested, I conducted a critical discourse analysis of publicly available comments and conversations by producers, participants, and observers.[21] The experiments examined were chosen through theoretical sampling to highlight particularly unusual and revelatory instances where the social construction of motivations was being jointly developed by the commenters.[22] For each case study, the most relevant discussions on the public web were identified and selected for analysis.[23] Participant discourse in these discussion threads was analyzed to inductively refine the predictions from the literature and to saturate some of the gaps in existing research. While many of these models are still in their infancy, this qualitative study usefully fleshes out some of the ways that participants construct and contest prosocial norms in voluntary payment schemes.

II. THE FOUNDATIONAL ASSUMPTIONS OF COPYRIGHT LAW

The common utilitarian justification for copyright is that it is "a tax on readers for the purpose of giving a bounty to writers."[24] It appears now that the role of copyright is not to provide authors with incentives to create,[25] but to provide "incentives for capital."[26] Without

21. *See generally* Teun A. van Dijk, *Principles of Critical Discourse Analysis*, 4 DISCOURSE SOC'Y 249 (1993) (discussing critical discourse analysis as a research methodology).

22. *See* Kathleen M. Eisenhardt & Melissa E. Graebner, *Theory Building from Cases: Opportunities and Challenges*, 50 ACAD. MGMT. J. 25, 27 (2007) (explaining inductive theory building through theoretical sampling where "cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs").

23. In particular, I examined comments in online discussion threads attached directly to PWYW and crowdfunding campaigns, as well as discussions on news websites, blogs, and interactive discussions with producers on other sites. While necessarily incomplete, use of this 'naturally occurring data' allowed me to investigate the way in which prosociality and free-riding is constructed and contested through discourse between participants in situ and in more general meta-commentary, enabling inductive theory building. *See* DAVID SILVERMAN, INTERPRETING QUALITATIVE DATA: METHODS FOR ANALYZING TALK, TEXT AND INTERATION 201 (3d ed. 2006) (discussing the use of "naturally occurring data" in qualitative analysis).

24. Baron Thomas Babington Macaulay, The First Speech on Copyright (Feb. 5, 1841), *in* MACAULAY'S SPEECHES ON COPYRIGHT AND LINCOLN'S ADDRESS AT COOPER UNION 18, 25 (Charles Robert Gaston ed., 1914).

25. For artists, the motivations for creative work have much more to do with desire and compulsion than with monetary compensation. *See* Jessica Silbey, *Harvesting Intellectual Property: Inspired Beginnings and "Work-Makes-Work," Two Stages in the Creative Pro-*

copyright, once a work is produced, it can be copied and redistributed very cheaply.[27] Copyright provides the ability to exclude free-riders, allowing producers to sell copies to the public and recoup their costs of production. Copyright accordingly enables producers to invest the resources necessary to fund new productions, on the gamble that they will be successful.

Copyright is considered necessary because users are generally assumed to be free-riders. This dominant way of thinking about copyright stems from Hardin's *Tragedy of the Commons* and Olson's *Logic of Collective Action*, which both assert that without private incentives, individuals are likely to free-ride rather than contribute to the maintenance or provision of public goods.[28] Conventional accounts of copyright accordingly assume that self-interested users will copy rather than pay for access to cultural and knowledge goods, leading to the underproduction of new works.[29] This is the tragedy: it is in each individual's direct interest to free-ride, but because people free-ride, everyone is worse off on average.

A number of well-known exceptions exist to this standard justification, particularly where creators are able to cross-subsidize publishing through other income.[30] Advertisers, for example, support a great

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cesses of Artists and Innovators, 86 NOTRE DAME L. REV. 2091, 2110 (2011); Rebecca Tushnet, *Economies of Desire: Fair Use and Marketplace Assumptions*, 51 WM. & MARY L. REV. 513, 515–16 (2009). The rewards of copyright accordingly do not appear to play a large role in motivating creative work. Raymond Shih Ray Ku et al., *Does Copyright Law Promote Creativity? An Empirical Analysis of Copyright's Bounty*, 62 VAND. L. REV. 1669, 1675 (2009). *See generally* Eric E. Johnson, *Intellectual Property and the Incentive Fallacy*, 39 FLA. ST. U. L. REV. 612, 624–28 (2012) (arguing that the reward structures of copyright do not incentivize creative work).

26. Julie E. Cohen, *Copyright as Property in the Post-Industrial Economy: A Research Agenda*, 2011 WIS. L. REV. 141, 148 (2011) (arguing that in practical effect, copyright's main role is in structuring markets to enable investment in expensive cultural production: "In particular, the incentives for capital that copyright supplies support mass culture industries and mass culture markets").

27. *Cf.* William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 335 (1989) ("When [copyright protection] is very low, few or no works will be created, since free riding by copiers may prevent any author from covering his cost of expression.").

28. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244 (1968) (discussing humans' "natural tendency to do the wrong thing": "Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons."); MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION 2 (1965) ("[U]nless there is coercion . . . to make individuals act in the common interest *rational, self-interested individuals will not act to achieve their common or group interests*.").

29. *See* JAMES BOYLE, THE PUBLIC DOMAIN: ENCLOSING THE COMMONS OF THE MIND 47–48 (2008) (describing the rhetoric of "the tragedy of the commons" and arguing that "when policy makers see a resource that is unowned, they tend to reach reflexively for 'the solving idea of property.' . . . Lacking an ability to exclude [free riding], creators will be unable to charge for their creations; there will be inadequate incentives to create.").

30. *See, e.g.*, Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 309 (1970) ("Colleges *now* pay for the creation of texts to some extent by paying salaries to their authors and allowing them time to write."); *cf.* Tom G. Palmer, *Intellectual Property: A Non-Posnerian*

deal of free distribution of cultural works.[31] Academics and other professionals publish as a by-product of their paid employment, motivated by prestige or a desire to share their work with the public.[32] Producers in the creative and cultural industries have always relied upon public subsidies and private patronage to some extent.[33] A great proportion of creative artists have little expectation of receiving substantial royalties from their works; they work second (and third) jobs to fund their personal creative work and meet their costs of publishing.[34] Additionally, an increasing number of creative professionals have chosen to give away fixed versions of their work (including recordings, books, films, comics, and photographs) in order to increase exposure and stimulate demand for their services and value-added goods (e.g., live events, bespoke work, merchandise, and premium or limited edition works).[35]

Law and Economics Approach, 12 HAMLINE L. REV. 261, 283 (1988) ("There are many mechanisms other than enforceable property rights for internalizing externalities, many of which are already in current use.").

31. *See* Joëlle Farchy, *The Internet: Culture for Free*, *in* A HANDBOOK OF CULTURAL ECONOMICS 245, 249 (Ruth Towse ed., 2d ed. 2011) (discussing two-sided markets).

32. *See* Arnold Plant, *The Economic Aspects of Copyright in Books*, 1 ECONOMICA 167, 168–69 (1934).

33. William J. Baumol, *Application of Welfare Economics*, *in* A HANDBOOK OF CULTURAL ECONOMICS, *supra* note 31, at 9 (explaining public funding for the arts and noting that "[m]uch artistic activity historically has depended on the voluntary patronage of royal princes and, later, merchant princes. As democracy took over the world's wealthier economies, government support often replaced that of the patrons."); *see* Ruth Towse, *Opera and Ballet*, *in* A HANDBOOK OF CULTURAL ECONOMICS *supra* note 31, at 314–15 (discussing subsidies for cultural industries, explaining that many opera houses are "private non-profit organizations which are in receipt of a mixture of public subsidy, private patronage and sponsorship").

34. *See* Hans Abbing, *Poverty and Support for Artists*, *in* A HANDBOOK OF CULTURAL ECONOMICS *supra* note 31, at 344 (reporting that "between one-third and one-half of the artists in the West and Australia have overall incomes from work that are at or below the so-called poverty line or subsistence level . . . . Looking at income from the arts alone instead of from work in general, artists earn even less."); STUART CUNNINGHAM & PETER HIGGS, WHAT'S YOUR OTHER JOB? A CENSUS ANALYSIS OF ARTS EMPLOYMENT IN AUSTRALIA 16 (2010), http://www.australiacouncil.gov.au/__data/assets/pdf_file/0009/79074/What_is_your_other_job_the_census_study.pdf (finding that in Australia, in most cases, the percentage of part-time employment is much higher in the arts than the workforce average); Bureau of Lab. Stat. U.S. Dep't Lab. *Musicians, Singers, and Related Workers*, *in* OCCUPATIONAL OUTLOOK HANDBOOK 326, 328 (library ed. 2010–11) ("Because many musicians find only part-time or intermittent work and experience unemployment between engagements, they often supplement their income with other types of jobs.").

35. *See, e.g.*, CORY DOCTOROW, *Giving It Away*, *in* CONTENT: SELECTED ESSAYS ON CREATIVITY, COPYRIGHT, AND THE FUTURE OF THE FUTURE 71 (2008) (explaining Cory Doctorow's decision to release his books for free); Liz Dowthwaite, *Getting Paid for Giving Away Art for Free: The Case of Webcomics*, CREATE (Feb. 24, 2014), http://www.create.ac.uk/blog/2014/02/25/webcomics-dowthwaite/ (discussing cross-subsidies in free online webcomics); Mike Masnick, *Nina Paley Releases Some Data on 'Sita Sings the Blues': The More She Shared, the More She Made*, TECHDIRT (Aug. 26, 2009, 9:50 AM), http://www.techdirt.com/articles/20090824/1723375986.shtml ("[W]here the money comes from is the containers. And the containers, for example, are DVDs, merchandise, t-shirts, 35 mm film prints, physical screenings . . . . The more the content flows freely, the more demand there is for those containers."); *Nine Inch Nails: The Slip*, NINE INCH NAILS,

In recent decades, the falling costs of production and distribution of creative work have led to an explosion in the visibility of ordinary or "vernacular" creativity[36] and an extraordinary blurring of the lines between amateurs and professionals[37] and between users and producers.[38] At the same time, free software developers, Wikipedia, and free culture artistic projects have shown that new communication tools enable widely distributed collaboration between unconnected individuals at a scale never seen before.[39] It is apparent through these examples that "commons-based peer-production"[40] can provide a viable model for the large-scale collaborative production of knowledge and cultural goods without excluding free-riders. The effect of both of these phenomena has been to massively increase the availability of copyrighted works produced outside the traditional copyright market paradigm in situations where the ability to exclude free-riders is not only unnecessary, but is sometimes actively rejected by producers interested in encouraging widespread distribution of their works.

In much of modern copyright discourse, however, all of these activities remain at the margins. Wikipedia, as a highly successful and widely known crowd-sourced and crowd-funded endeavor, is an outlier — an exception to the norm[41] in the same way that free software is an exception to the conventional form of software development.[42] For the core of professional creative production, the dominant assumption remains that selling access to copies is required to coordinate and fund

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http://dl.nin.com/theslip/signup (last visited Dec. 18, 2014) ("[A]s a thank you to our fans for your continued support, we are giving away the new nine inch nails album one hundred percent free . . . for those of you interested in physical products, fear not. we [sic] plan to make a version of this release available on CD and vinyl.").

36. Jean Burgess, *Hearing Ordinary Voices: Cultural Studies, Vernacular Creativity, and Digital Storytelling*, 20 CONTINUUM: J. MEDIA & CULTURE 201, 206–07 (2006) (introducing the concept of "vernacular creativity" to denote the decentralized and democratized production of media by individuals as an ordinary practice of everyday life).

37. *See* Dan Hunter & F. Gregory Lastowka, *Amateur-to-Amateur*, 46 WM. & MARY L. REV. 951, 951–57 (2004) (discussing the rise of amateur production).

38. *See* AXEL BRUNS, BLOGS, WIKIPEDIA, SECOND LIFE, AND BEYOND: FROM PRODUCTION TO PRODUSAGE 9 (2008) (introducing the concept of "produsage").

39. *See* LAWRENCE LESSIG, REMIX: MAKING ART AND COMMERCE THRIVE IN THE HYBRID ECONOMY 162–72 (2008) (discussing the "sharing economy" beyond Wikipedia).

40. *See* YOCHAI BENKLER, THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM 60 (2006) (introducing the term "commons-based peer-production" to denote socio-economic production by a network of collaborators who share the benefits of their labor and are organized through voluntary and decentralized institutions, as opposed to traditional hierarchical firm-based or market-based production processes).

41. *See* Benjamin Mako Hill, Almost Wikipedia: Eight Early Encyclopedia Projects and the Mechanisms of Collective Action 2 (Apr. 23, 2014) (unpublished Ph.D. dissertation, M.I.T.), *available at* http://mako.cc/academic/hill-almost_wikipedia-DRAFT.pdf (explaining that only a small proportion of collaborative production projects online achieve success).

42. *See, e.g.*, Jürgen Bitzer et al., *Intrinsic Motivation in Open Source Software Development*, 35 J. COMP. ECON. 160, 161 (2007) (recognizing a dichotomy between commercial software development and open source development).

cultural production.[43] Because users are often free-riders, in order to properly support the production of expensive works of mass culture, it is assumed that "a regime of copyright law must supply incentives for capital."[44] By providing an ostensibly value-neutral method of coordinating cultural production, the copyright market provides a method to extract money from consumers without relying on public funds, private patrons, or advertisers, each of which can have a harmful distorting effect on the content of the work.[45]

III. USERS ARE NOT (ALWAYS) FREE-RIDERS

The mainstream copyright debate generally focuses on why consumers choose to infringe and how free-riding can be deterred. Recently, however, a new narrative about the future of copyright is emerging in opposition to copyright's perceived failure to provide a fair deal to both artists and consumers.[46] The normative underpinnings of this new narrative rest on the social benefits of widespread access to information,[47] contrary to the dominant narrative that focuses on enabling creators to make a living in the face of mass copying in the digital economy. This new narrative asks an interesting question: Why do consumers choose to pay, and how can they be encouraged? In this producer-centric sense, Techdirt CEO and technology writer Mike Masnick has distilled a simplified version of alternate business models of producers of creative content into a provoking algorithm: "Connect with Fans (CwF) + Reason to Buy (RtB) = The Business Model."[48] Masnick's core argument is that the focus on free-riders in copyright industries is misplaced. Rather than expending energy trying to combat piracy in order to exclude people from accessing goods that are

43. *Cf.*, Joëlle Farchy, *P2P and Piracy: Challenging the Cultural Industries' Financing System*, 1 REV. OF ECON. RES. ON COPYRIGHT ISSUES 55, 66 (2004) ("The free software philosophy can never under any circumstances be extended to productions where the fixed costs are extremely high (e.g.[,] certain kinds of movies).").

44. Cohen, *supra* note 26, at 149.

45. NIEL WEINSTOCK NETANEL, COPYRIGHT'S PARADOX 81 (2008) (discussing copyright's "structural function," which "supports a sector of authors and publishers who look to the market, not government patronage, for financial sustenance and who thus gain considerable independence from government influence").

46. *See, e.g.*, Jessica Litman, *Real Copyright Reform*, 96 IOWA L. REV. 1, 41 (2010) (arguing that the legislative process used to enact US copyright laws "pays shockingly little attention to the reasonable interests of creators or members of their audiences").

47. *Cf.*, John Perry Barlow, *The Economy of Ideas: A Framework for Patents and Copyrights in the Digital Age*, WIRED (Mar. 1994), *available at* http://archive.wired.com/wired/archive/2.03/economy.ideas.html (quoting Stewart Brand: "Information Wants To Be Free"). *See generally* Eben Moglen, *The dotCommunist Manifesto* (Jan. 2003), http://emoglen.law.columbia.edu/my_pubs/dcm.html (providing an overview of the philosophical underpinnings of the free software movement).

48. Mike Masnick, *The Future of Music Business Models (And Those Who Are Already There)*, TECHDIRT (Jan. 5, 2010, 10:18 AM), http://www.techdirt.com/articles/20091119/1634117011.shtml.

now costless to distribute — like digital music, movies, and books — Masnick argues that producers should "set them free" to build attention and loyal audiences.[49] Doing this, Masnick argues, will increase the value of complementary goods and services that are actually scarce, for which producers can much more easily charge a fee.[50] Masnick's argument fits neatly into the narrative of other commentators like Cory Doctorow and Tim O'Reilly, who have long argued that the biggest threat to artists is not piracy, but obscurity.[51] Chris Anderson's book, *Free*, then encapsulates the benefits of zero-pricing for business and provides a comprehensive survey of business models not based on artificial scarcity.[52] This new narrative offers some hope that the crisis in copyright may be overstated,[53] and that artists and producers can flourish in the digital economy.

A. Pay-What-You-Want Schemes

Thousands of producers have tested this narrative in practice. Across the creative industries and around the world, independent producers are combating copyright infringement not through legal enforcement, but by giving their audience a reason to pay. PWYW models and crowdfunding[54] campaigns are starting to allow musicians,[55] comedians,[56] authors,[57] documentary and feature filmmakers,[58] and many more to raise the funds they need without restricting

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49. *Id.*

50. Mike Masnick, *The Grand Unified Theory on the Economics of Free*, TECHDIRT (May 3, 2007, 12:23 PM), http://www.techdirt.com/articles/20070503/012939.shtml.

51. *See* DOCTOROW, *supra* note 35, at 80; Tim O'Reilly, *Piracy is Progressive Taxation, and Other Thoughts on the Evolution of Online Distribution*, OPENP2P.COM (Dec. 11, 2002), http://openp2p.com/lpt/a/3015.

52. *See* CHRIS ANDERSON, FREE: HOW TODAY'S SMARTEST BUSINESSES PROFIT BY GIVING SOMETHING FOR NOTHING 7 (2009).

53. *See* Julie E. Cohen, *Pervasively Distributed Copyright Enforcement*, 95 GEO. L.J. 1, 24 (2006) (arguing that copyright industries have used a rhetoric of permanent crisis to justify strengthened and more pervasive controls over the flow of information).

54. Peter Spellman, *Crowd Funding: Arts Patronage by the Masses,* BERKLEE MUSIC, http://www.berklee.edu/bt/194/crowd_funding.html (last visited Dec. 18, 2014) (defining crowdfunding as "the act of informally generating and distributing funds, usually online, by groups of people for specific social, personal, entertainment-related or other purposes"); *see also* Tim Kappel, Ex Ante *Crowdfunding and the Recording Industry: A Model for the U.S.?*, 29 LOY. L.A. ENT. L. REV. 375, 375 (2009).

55. *See, e.g.*, Greg Kot, *Radiohead's "In Rainbows" Experiment Pays off with 3 Million Sales*, TURN IT UP (Oct. 20, 2008, 12:10 PM), https://web.archive.org/web/20130107045529/http://leisureblogs.chicagotribune.com/turn_it_up/2008/10/radioheads-in-r.html (accessed through the Internet Archive index); Lipsman, *supra* note 8.

56. Cory Doctorow, *Louis CK's DRM-Free Direct-Sales Video Experiment Pays Off*, BOINGBOING (Dec. 15, 2011, 11:40 AM), http://boingboing.net/2011/12/15/louis-cks-drm-free-direct-sa.html.

57. *See, e.g.*, UNGLUE.IT, https://unglue.it/ (last visited Dec. 18, 2014).

58. A number of Creative Commons-licensed films have been successfully funded on the crowdsourcing platform Kickstarter. *See, e.g.*, Annie Berman, *The Faithful: The King, the Pope, the Princess*, KICKSTARTER, https://www.kickstarter.com/projects/annieberman/the-

the distribution of their works. Across the range of creative industries, a series of experiments by individual artists and producers demonstrates that consumers will sometimes choose to pay rather than free-ride.

Radiohead's *In Rainbows* provides not the first, but one of the most well-known, tests of PWYW pricing in the creative industries. After leaving their record label, Radiohead released a digital download of their next album on their website, allowing consumers to name their own price. Whether or not Radiohead's experiment was a success depends largely on the observer's point of view: to some, the fact that a large number of consumers chose to free-ride and pay a price of zero showed that the model was deeply flawed.[59] To others, the fact that *In Rainbows* eventually sold over three million copies in addition to the digital downloads, raised significantly greater profits than Radiohead's previous studio album, debuted on top of the UK and US charts, and launched their largest tour to date showed the experiment to be a resounding success.[60]

Since Radiohead's experiment, many others have adopted PWYW business models.[61] Nine Inch Nails' openly licensed *Ghosts I–IV* was a spectacular success: Trent Reznor's industrial rock group reported profits of more than $1.6 million from fans who chose to purchase copies of the entire album despite having the option to freely download the first nine tracks.[62] The Humble Bundle's model for computer games allows users to specify not only their price, but the way the price is split between the game developers, select charities, and Humble Bundle, Inc. Each bundle typically attracts several hundred thousand backers, with the average payment often between four

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faithful-the-king-the-pope-the-princess (last visited Dec. 18, 2014); Hanna Sköld, *Granny's* [sic] *Dancing on the Table — A Granny-Invasion!*, KICKSTARTER, https://www.kickstarter.com/projects/370814120/grannys-dancing-on-the-table-a-granny-invasion (last visited Dec. 18, 2014); Frank Weaver, *Explore Ancient Rock Art, Experience Guarani Culture!*, KICKSTARTER, https://www.kickstarter.com/projects/frankweaver/explore-ancient-rock-art-experience-guarani-cultur (last visited Dec. 18, 2014).

59. Leah Belsky et al., *Everything in Its Right Place: Social Cooperation and Artist Compensation*, 17 MICH. TELECOMM. & TECH. L. REV. 1, 8 (2010) (noting that many commentators "noted the large percentage of downloaders who paid nothing . . . and concluded that music consumers are generally selfish and unwilling to contribute money to finance the music they enjoy").

60. *Id.*; Daniel Kreps, *Radiohead Publishers Reveal "In Rainbows" Numbers*, ROLLING STONE (Oct. 15, 2008), http://www.rollingstone.com/music/news/radiohead-publishers-reveal-in-rainbows-numbers-20081015; Eliot Van Buskirk, *New* In Rainbows *Numbers Offer Lessons for Music Industry*, WIRED (July 31, 2008, 4:11 PM), https://web.archive.org/web/20130731050722/http://www.wired.com/listening_post/2008/07/new-in-rainbows/ (accessed through the Internet Archive index).

61. *See* Ju-Young Kim et al., *Pay What You Want: A New Participative Pricing Mechanism*, 73 J. MARKETING 44, 45 (2009) (discussing PWYW pricing).

62. Cheryl Foong, *Sharing with Creative Commons: A Business Model for Content Creators*, PLATFORM: J. MEDIA & COMM. (SPECIAL ISSUE) 64, 67 (2010).

and ten dollars.[63] By the end of 2013, Humble's bundles had raised approximately $70 million in revenue,[64] with $22.5 million going directly to charities.[65] Humble's success has led to the launch of a number of similar PWYW bundles,[66] and Humble and others have also offered bundles of e-books, stand-up comedy, music, and other digital goods. Interestingly, the success of the Humble model shows that bundling schemes can provide independent producers easy access to distribution and marketing channels like those used by more established creators like Radiohead and Nine Inch Nails. The function of intermediaries as tastemakers and gatekeepers in providing discoverability is still important to the success of these schemes, but it is being undertaken by Humble itself, rather than established media distributors. Another example is Semaphore Press, founded in 2008, which publishes casebooks and makes digital downloads available to students on a PWYW scheme, usually with a suggested price of thirty dollars.[67] Semaphore's data shows that in the fall semester of 2012 around eighty-three percent of students chose to pay rather than free-ride, and eighty-seven percent of those students chose to pay the suggested price of $30.[68]

The evidence amassed from PWYW experiments to date suggests that consumers do often pay when they could free-ride.[69] The next Part canvasses some of the reasons why people choose to pay, presenting evidence from anthropology and behavioral economics that explains why a substantial proportion of humans across many different societies will often choose to cooperate rather than free-ride.

B. Explaining Altruism in Pay-What-You-Want Schemes

The rational actor model of classical economic theory suggests that people will not pay more than the minimum to get access to a

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63. Humble Bundle, *Prior Bundle Statistics*, *supra* note 12. Like many PWYW schemes, averages are often somewhat skewed by a handful (often fewer than five) of patrons, usually well-known game developers or organizations, who pay thousands of dollars each round.

64. *Id.*

65. Humble Bundle, *How Much Has Humble Bundle Raised for Charity?*, HUMBLE BUNDLE, https://web.archive.org/web/20130909235606/http://support.humblebundle.com/customer/portal/articles/657215-how-much-has-humble-bundle-raised-for-charity- (accessed through the Internet Archive index) (last visited Dec. 18, 2014) (the Humble Bundle support page stating "[a]s of August 28, 2013, our customers have given more than $22.5 million" to charity); John Walker, *Interview: Humble Bundle on Humble Bundles*, ROCK, PAPER, SHOTGUN (Aug. 23, 2013, 1:30 PM), http://www.rockpapershotgun.com/2013/08/23/interview-humble-bundle-on-humble-bundles/.

66. *See, e.g.*, INDIE GALA, http://www.indiegala.com/ (last visited Dec. 18, 2014); INDIEROYALE, http://www.indieroyale.com/ (last visited Dec. 18, 2014).

67. *About Semaphore Press*, SEMAPHORE PRESS, http://semaphorepress.com/about.html (last visited Dec. 18, 2014).

68. Loren, *supra* note 10, at 13–14.

69. Belsky et al., *supra* note 59, at 5.

good they value.[70] In a PWYW scheme, then, a rational consumer should choose to pay zero (or the minimum threshold amount), in other words, to free-ride. The examples above demonstrate that this is not the case — people often voluntarily choose to support cultural production by paying when they do not have to. In a pure PWYW scheme, choosing to pay more than necessary is altruistic cooperation, in the sense that it is not directly or indirectly beneficial for the individual.[71] Clearly, when people pay more than they have to in PWYW schemes, they are choosing to pay that extra amount for reasons other than personal wealth maximization.

Why would people choose not to free-ride? The answer is that *homo economicus*, the simple model of humans as rational, self-interested wealth-maximizers, is inaccurate.[72] Decisions about whether and how much to pay are influenced by regard for others and social conceptions of fairness and reciprocity.[73] One compelling explanation for cooperation is simply that "[r]eciprocity is a basic norm taught in all societies":[74] People will often punish transgression and reward kindness with kindness.[75] A mass of anthropological evidence demonstrates that people are generally cooperative social animals.[76] The impulse to cooperate, reward kindness, and punish free-riding seems to

70. *See* Lawrence E. Blume & David Easley, *Rationality*, THE NEW PALGRAVE DICTIONARY OF ECONOMICS, http://www.dictionaryofeconomics.com/article?id=pde2008_R000277 (last visited Dec. 18, 2014).

71. *See* S.A. West et al., *Social Semantics: Altruism, Cooperation, Mutualism, Strong Reciprocity and Group Selection*, 20 J. EVOLUTIONARY BIOLOGY 415, 419 (2007) (defining altruistic cooperation).

72. *See* Herbert Gintis, *Beyond* Homo Economicus*: Evidence from Experimental Economics*, 35 ECOLOGICAL ECON. 311, 320 (2000) (arguing that "[t]he economist's treatment of rationality . . . cannot be supported."); Samuel Bowles & Herbert Gintis, Homo Reciprocans, 415 NATURE 125, 127 (2002) (explaining that individuals use "altruistic punishment," from which they derive no personal benefit, in order to discourage others from free-riding).

73. *See generally* Ernst Fehr & Klaus M. Schmidt, *The Economics of Fairness, Reciprocity and Altruism — Experimental Evidence and New Theories*, *in* 1 HANDBOOK OF THE ECONOMICS OF GIVING, ALTRUISM AND RECIPROCITY 615, 617 (Serge-Christophe Kolm & Jean Mercier Ythier eds., 2006) ("This [large body of] evidence indicates that a substantial percentage of the people are strongly motivated by other-regarding preferences and that concerns for the well-being of others, for fairness and for reciprocity, cannot be ignored in social interactions."); Iris Bohnet, *Experiments*, *in* THE OXFORD HANDBOOK OF ANALYTICAL SOCIOLOGY 639, 649 (Peter Hedström & Peter Bearman eds., 2009); Martin A. Nowak et al., *Fairness Versus Reason in the Ultimatum Game*, 289 SCIENCE 1773, 1773 (2000).

74. Elinor Ostrom, Indiana University, A Behavioral Approach to the Rational Choice Theory of Collective Action, Presidential Address, American Political Science Association (1997), *in* 92 AM. POL. SCI. REV. 1, 10 (1998).

75. *See* SAMUEL BOWLES & HERBERT GINTIS, A COOPERATIVE SPECIES: HUMAN RECIPROCITY AND ITS EVOLUTION 20 (2011) ("In experiments we commonly observe that people sacrifice their own payoffs in order to cooperate with others, to reward the cooperation of others, and to punish free-riding, even when they cannot expect to gain from acting this way."). *See generally* Ernst Fehr & Urs Fischbacher, *The Nature of Human Altruism*, 425 NATURE 785 (2003).

76. *See* BOWLES & GINTIS, *supra* note 75, at 6–7.

have strong evolutionary roots: our ancestors, living in small bands, had to cooperate to survive.[77] Social norms of fairness are expressed and reinforced through this cycle of rewarding cooperators and shaming and shunning free-riders. In evolutionary biology, this is termed "strong reciprocity,"[78] to distinguish it from cases of "direct reciprocity," where a favor is likely to be repaid (and cooperation is therefore directly beneficial to the individual).[79]

As a rough baseline, behavioral experiments exploring reciprocity in laboratory settings have consistently found that about half of people tested are "conditional cooperators" who are "willing to contribute more to a public good the more others contribute."[80] The rational actor model predicts that in experiments designed to model contributions to public goods, where cooperation increases the rewards to everyone but leaves the participant personally worse off, rational participants will always choose to free-ride. In reality, participants often choose to cooperate.[81] Other experiments show that people are willing to increase their contribution when others cooperate more as well.[82] When they have the opportunity to do so, people are also willing to incur personal costs to punish individuals who appear to be unfairly taking advantage of others.[83] Most of these people will withdraw their cooperation if they do not believe that others will also cooperate —

77. *See* CHRISTOPHER BOEHM, MORAL ORIGINS: THE EVOLUTION OF VIRTUE, ALTRUISM, AND SHAME 10–11 (2012); BOWLES & GINTIS, *supra* note 75, at 50 ("[C]ooperative groups tend to prevail in the frequent inter-group competition and to survive the severe environmental crises that . . . characterized the early human condition.").

78. *See* Ernst Fehr & Simon Gächter, *Strong Reciprocity, Human Cooperation, and the Enforcement of Social Norms*, 13 HUM. NATURE 1, 3 (2002) (characterizing strong reciprocity as willingness to sacrifice resources either to reward kindness or punish unkindness in others "*even if this is costly and provides neither present nor future material rewards for the reciprocator*").

79. *See* West et al., *supra* note 71, at 421.

80. Urs Fischbacher et al., *Are People Conditionally Cooperative? Evidence from a Public Goods Experiment*, 71 ECON. LETTERS 397, 397 (2001); Colin F. Camerer & Ernst Fehr, *Measuring Social Norms and Preferences Using Experimental Games: A Guide for Social Scientists*, *in* FOUNDATIONS OF HUMAN SOCIALITY: ECONOMIC EXPERIMENTS AND ETHNOGRAPHIC EVIDENCE FROM FIFTEEN SMALL-SCALE SOCIETIES 55, 66 (Joseph Henrich, et al. eds., 2004); Rachel T.A. Croson, *Theories of Commitment, Altruism and Reciprocity: Evidence from Linear Public Goods Games*, 45 ECON. INQUIRY 199, 200 (2007) (finding that people often contribute an amount that approximates the median or average of the contributions they know or believe others to contribute); Fehr & Gintis, *supra* note 15, at 50–51 (presenting a synthesis of the literature on behavioral experiments of cooperation and concluding that "the vast majority of subjects can be classified either as purely self-regarding or as conditionally cooperative").

81. *See* Gerald Marwell & Ruth E. Ames, *Economists Free Ride, Does Anyone Else?: Experiments on the Provision of Public Goods, IV*, 15 J. PUB. ECON. 295, 307 (1981).

82. *See* Camerer & Fehr, *supra* note 80, at 75–76.

83. *See id.* at 68; Ernst Fehr & Simon Gächter, *Altruistic Punishment in Humans*, 415 NATURE 137, 137 (2002) (finding that in experiments, people punish free-riders if they are able to, even when it is not directly in their best interests).

nobody likes to be a "sucker."[84] The same experiments demonstrate that another group — perhaps one third of all participants — will still act as predicted by a model of rational wealth maximization and will almost always free-ride given the choice.[85]

Basic PWYW schemes can often be successful by appealing to the cooperative nature of humans, even if only half of those who respond choose to cooperate. While a proportion of users will always free-ride, if a sufficient number of conditional cooperators can be persuaded to contribute, producers are able to recoup their investment (and profit) in the absence of any means to exclude the free-riders. The rate at which conditional cooperators choose to participate is strongly affected by their evaluation of the likelihood that others will also cooperate. Social measures of fairness and esteem, the warm glow of helping others, a desire to reciprocate, and ethical commitments also may affect this participation rate. In the following sections, I demonstrate how each of these factors contributes to consumer decisions to cooperate in voluntary payment schemes for creative works.

1. Fairness and Esteem

Generally speaking, humans care strongly about how they perceive themselves and how others will perceive them.[86] They will, accordingly, act in ways that are considered to be right, in accordance with social norms. A large body of behavioral evidence shows that, against their direct self-interest, people make offers that are fair and reject offers that are manifestly unfair.[87] These experiments have found that people who express both a personal commitment to fairness and a concept of fairness that encourages cooperation are often willing to pay more in PWYW schemes.[88] For a small proportion of patrons, the shame of not paying also seems to play a large role in their decisions to pay.[89]

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84. *See* Wendy J. Gordon, *Discipline and Nourish: On Constructing Commons*, 95 CORNELL L. REV. 733, 736 (2009) (discussing "sap aversion": "people have a taste for not being a [sic] taken for a sucker, a fool, a simpleton, a jerk, or a sap").

85. *See* Camerer & Fehr, *supra* note 80, at 66–67.

86. *See* GEOFFREY BRENNAN & PHILIP PETTIT, THE ECONOMY OF ESTEEM: AN ESSAY ON CIVIL AND POLITICAL SOCIETY 15 (2004); James Andreoni & B. Douglas Bernheim, *Social Image and the 50-50 Norm: A Theoretical and Experimental Analysis of Audience Effects*, 77 ECONOMETRICA 1607, 1624 (2009).

87. Camerer & Fehr, *supra* note 81, at 69–70 (reporting on results of "dozens of experiments under different conditions in many different countries").

88. *See, e.g.*, Marwell & Ames, *supra* note 81, at 308–09 (finding that a commitment to a concept of fairness that encourages high contributions to a public goods game was strongly correlated with actual payment amounts).

89. Tobias Regner, *Why Consumers Pay Voluntarily: Evidence from Online Music* 20 (Jena Econ. Res. Paper No. 2010-081, 2010) (reporting that in a PWYW music model, "[g]uilt seems to have the strongest effect on behaviour . . . but it applies only to a few people").

The moral requirements of fairness are under constant active construction in PWYW schemes. The way a campaign is framed will likely have a strong effect on what people consider fair and are willing to pay.[90] Many people believe that artists deserve to be paid for their work, and creative goods tend to have well-established reference prices — the standard price of a CD, for example, sets a benchmark for what might be considered fair. Generally speaking, PWYW patrons disproportionately choose to pay at the default or suggested reference price.[91] In some cases, producers set a default price supported by an explanation of their costs and a normative justification of a fair return.[92] As might be expected, PWYW schemes are rich with discussions of how to value a particular product. Sometimes participants attempt to derive a figure based on hours of enjoyment, as measured against some external measure of value, such as a two-hour film.[93] Other time-based value scales are much more subjective and opaque, like this example from a purchaser of independent game developer 2D Boy's PWYW offering, *World of Goo*: "I'll either be bored of it within 10 minutes, in which case $1 is fair, or I'll really love it, in which case I'll buy it again for $20."[94]

Importantly, however, counter-arguments exist in favor of free-riding, and individual participants sometimes justify their decisions to free-ride on a variety of factors. One of the most common counter-arguments proceeds on the basis that consumers may not have paid for

90. *See, e.g.*, Varda Liberman et al., *The Name of the Game: Predictive Power of Reputations Versus Situational Labels in Determining Prisoner's Dilemma Game Moves*, 30 PERSONALITY SOC. PSYCHOL. BULL. 1175, 1177 (2004) (finding that in otherwise identical games, labeling an experiment as a "Community Game" led participants to expect more cooperation from others (and also to reciprocate by cooperating in turn) more often than when the experiment was framed as a "Wall Street Game").

91. Regner, *supra* note 89, at 20–21; *see also* Belsky et al., *supra* note 59, at 33. It is not wholly clear, however, whether consumers prefer the default because the reference price is considered to be the right price to pay or because it is simply the easier option avoiding the more difficult mental calculation cost. *See* Klaus M. Schmidt et al., Pay What You Want *as a Marketing Strategy in Monopolistic and Competitive Markets*, MGMT. SCI. 14 (article in advance Sept. 30, 2014), *available at* http://pubsonline.informs.org/doi/abs/10.1287/mnsc.2014.1946.

92. *See, e.g.*, Matthias Greiff et al., *Pay What You Want — But Pay Enough! Information Asymmetries and PWYW-Pricing* 5 (Joint Discussion Paper Series in Econ. No. 04-2013, Jan. 2013) (noting the strong influence of transparency (or otherwise) of the creator's production costs on consumers' willingness to pay under PWYW conditions).

93. *See, e.g.*, FistsOfTinsel, Comment to *World of Goo "Pay What You Want" Sale a "Huge Success,"* THE ESCAPIST FORUMS (Oct. 21, 2009, 11:00 AM), http://www.escapistmagazine.com/forums/read/7.150951-World-of-Goo-Pay-What-You-Want-Sale-a-Huge-Success#3558487 (addressing the perceived large number of people who chose to pay very little for *World of Goo*: "[S]houldn't you really be basing the amount you pay against what you'd pay for other forms of entertainment, and compare it to the number of hours you'd get out of Goo? You could even divide that result and still get a lot more than a penny.").

94. A potential player, Comment to *Pay-What-You-Want Birthday Sale Results*, 2D BOY (Oct. 21, 2009, 1:13 AM), http://2dboy.com/2009/10/19/birthday-sale-results//#comment-16469.

access anyway, which means not every free-rider is a lost sale that imposes harm on the producer. Another commenter on *World of Goo*'s results typifies the sentiment: "Yeah, people paying some low amount seems bad, but a lot of those folks wouldn't have bought it otherwise. So [the game producer] still end up ahead."[95] Other discussions focus around the ability of people to pay. Participants often explain their decisions to underpay based on their personal financial circumstances, while others frequently criticize those justifications as selfish.[96] These norms are under constant construction by participants in discussions around PWYW schemes.

While it has not been extensively empirically verified, there is a strong suggestion that PWYW works best when producers can develop strong personal links with their audiences.[97] The extent to which people care about what others think of them depends on their relationship to those other people.[98] Fans, for example, might be strongly motivated to support their favorite artists, with whom they feel a special connection. Conversely, when they do not trust the motives or behavior of the producer, people are more likely to pay less and pay less often.[99] This leads to two common and related post-hoc justifications for a person's choice to infringe rather than pay for access to entertainment goods: a single lost sale means little to large corporations and, since individual artists are notoriously unfairly treated by publishers,[100] a single lost sale means even less to the artists. This intuition is reinforced quite commonly in the discourse around PWYW. Mikolaj Kaminski, an independent game designer known by the name Sos Sosowski, explains how he tried to personalize himself to his audience: "I think that if people who torrent the game are aware that

95. NKDietrich, Comment to *Pay-What-You-Want Game Sale Results*, [H]ARD|FORUM 3 (Oct. 22, 2009, 5:44 AM), http://hardforum.com/showpost.php?p=1034795723&postcount=46.

96. This issue was heavily debated in the data. *Compare* hypes057, Comment to *Pay-What-You-Want Birthday Sale Results*, 2D BOY (Oct. 20, 2009, 9:30 AM), http://2dboy.com/2009/10/19/birthday-sale-results/#comment-16427 ("I bought the game for a mere $1, I feel real bad about that guys. . . . I like the game and if you give the option to donate more after this I will when I get some more funds!"), *with* FistsOfTinsel, *supra* note 93.

97. *See* Vincent Mak et al., *"Pay What You Want" as Threshold Public Good Provision* 38–39 (Cambridge Judge Business School, Working Paper No. 3/2014, June 26, 2014) (arguing that the conditions for threshold public good provision are likely to be met for independent bands with loyal followings, amongst others).

98. *See* Tore Ellingsen & Magnus Johannesson, *Pride and Prejudice: The Human Side of Incentive Theory*, 98 AM. ECON. REV. 990, 992 (2008) (proposing a model of behavior based on social esteem).

99. Francisco J. León et al., *How Much Would You Like To Pay? Trust, Reciprocity and Prosocial Motivations in* El Trato, 51 SOC. SCI. INFO. 389, 409 (2012) (suggesting that people will pay less when they detect ulterior motives for actions).

100. *See* Belsky et al., *supra* note 59, at 13 (arguing that "the overwhelming majority of album releases net no revenue for the individual artist, and it is common for artists to wind up owing money to the record label for un-recouped recording and promotion costs").

there is a live person behind the game, and makes the game for a living, they are more willing to provide support than to a giant lifeless studio."[101]

The responses to Kaminski's experiment often reinforce the importance of supporting independent artists. Consumers of independent games tend to view independent producers as more authentic artists, who create out of love — as opposed to the perceived greed of corporate producers. As such, some members of the community view independent developers as morally worthy of support in a way that large corporations are not.[102] Importantly, commentators hotly contest this point — reinforcing an imperative against stealing and rejecting justifications for free-riding as selfish: "If you can't afford it, maybe [you're] not entitled to it."[103] Ultimately, however, because large labels can reach a much wider audience, they can often raise much more absolute revenue even if they have lower rates of participation.

The way participation is socially constructed also feeds into the warm glow that people receive from choosing to cooperate.[104] People often like to be recognized as generous or as being tastemakers,[105] and many crowdfunding and PWYW projects exploit these desires by providing status rewards for various levels of support. For example, the Humble Bundle[106] prominently lists top contributors along with the amount they pledged. In many other crowdfunding campaigns, pledging over a threshold might earn a patron a line in the credits of a film, game, book, or recording; a distinguishing avatar in an online forum or computer game; backstage access a performance; and so on. The strength of this type of warm glow is hard to measure, but it is likely to be important to some backers.

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101. Kyle Orland, *How One Game Developer Is Making the Pirate Bay Work for Him*, ARS TECHNICA (Sept. 7, 2012, 7:00 PM EDT), http://arstechnica.com/gaming/2012/09/how-one-game-developer-is-making-the-pirate-bay-work-for-him/.

102. Sertigo, Comment to *These* [sic] *Kind of Developers Truly Deserve Recognition.*, REDDIT (2012), http://www.reddit.com/r/gaming/comments/ydbdk/these_kind_of_developers_truly_deserve_recognition/c5ujacs ("Pirating from indie developpers [sic] is totally wrong, they make almost no money [from their games].").

103. IceBreak, Comment to *These* [sic] *Kind of Developers Truly Deserve Recognition.*, REDDIT (2012), http://www.reddit.com/r/gaming/comments/ydbdk/these_kind_of_developers_truly_deserve_recognition/ (on file with author).

104. *See* James Andreoni, *Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving*, 100 ECON. J. 464, 464 (1990) (discussing the warm glow that individuals may receive from charitable behavior and the effect of social pressure and personal preferences in motivating decisions to contribute to public goods).

105. *See* HELEN KLAEBE & REBECCA LAYCOCK, HOW TO WORK THE CROWD: A SNAPSHOT OF BARRIERS AND MOTIVATIONS TO CROWDFUNDING 7 (2012) (stating that donors contribute to crowdfunding campaigns to "connect[] to, the 'new hot.' This motivation increases (and is likely to be repeated) if the donor is an early identifier or supporter of an 'unknown' talent. Talent spotting early in a creative practitioner's career is considered very cool within some social networks."). *See generally* JASON POTTS, CREATIVE INDUSTRIES AND ECONOMIC EVOLUTION 81 (2011) ("Credible signalling [sic] builds reputation, and reputation is social capital . . . .").

106. HUMBLE BUNDLE, https://www.humblebundle.com/ (last visited Dec. 18, 2014).

2. Other-Regarding Norms

In addition to wanting to cooperate and wanting to be seen to cooperate, people also care about the welfare of others. In behavioral experiments, cooperation increases when more is at stake — participants apparently rise to the occasion when the group stands to gain a lot from working together.[107] This implies that, contrary to the predictions of the rational actor model, "many people are positively weighting the outcomes of others."[108] People who give to others derive personal satisfaction from the act of helping or from "making a difference."[109] An emerging strain of neuroscience experiments suggests that this has a biological component: rewards received by others activate the same neural circuitry as rewards received by oneself.[110] Evidence from behavioral economics suggests that consumers will sometimes purchase more often and pay more under a PWYW scheme with a charitable component than either a fixed-price scheme or a PWYW scheme without a charitable component.[111] This insight has been leveraged by PWYW sites to increase both number of purchases and profit. The Humble Bundle, for example, prominently stresses that a portion of the money participants choose to pay goes by default to a recognized charity (typically 10–30%).[112] Participants are also given the agency to redirect any proportion of their purchase price to charity and are sometimes allowed to elect a split among several charities.

3. Reciprocity

Consumers who pay more than required in PWYW schemes are often motivated to reward what they see as kindness in producers. When given a good for free that is normally costly and then subse-

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107. *See* David Sally, *Conversation and Cooperation in Social Dilemmas: A Meta-Analysis of Experiments from 1958 to 1992*, 7 RATIONALITY & SOC'Y 58, 79 (1995).

108. Peter Kollock, *Social Dilemmas: The Anatomy of Cooperation*, 24 ANN. REV. SOC. 183, 200 (1998).

109. *See* Brian Duncan, *A Theory of Impact Philanthropy*, 88 J. PUB. ECON. 2159, 2176 (2004).

110. *See* Ernst Fehr & Colin F. Camerer, *Social Neuroeconomics: The Neural Circuitry of Social Preferences*, 11 TRENDS IN COGNITIVE SCI. 419, 425 (2007) (providing a review of the literature and arguing that studies to date "reinforce the idea that social preferences for donating money, rejecting unfair offers, trusting others and punishing those who violate norms, are genuine expressions of preference").

111. *See* Ayelet Gneezy et al., *Shared Social Responsibility: A Field Experiment in Pay-What-You-Want Pricing and Charitable Giving*, 329 SCIENCE 325, 326 (2010); Oege Dijk & Martin Holmén, Charity, Incentives, and Performance 16–17 (Nov. 1, 2012) (unpublished manuscript) *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2205622 (finding that charity increased cooperation in a laboratory setting).

112. *See* HUMBLE BUNDLE, https://www.humblebundle.com/ (last visited Dec. 18, 2014) (Humble Bundle's front page has prominent links saying "Pay what you want" and "Support charity." The charitable cause is prominently placed on the campaign page.).

quently given an option to pay, studies show that consumers are apparently often motivated to repay the generosity of the artist or producer. A survey of people who voluntarily gave money to purchase access to music under a PWYW model found that a portion of customers explicitly acknowledged the kind behavior of the producer in making music abundantly available on a try-before-you-buy model, and these customers reciprocated by paying more than those with other motivations.[113] The same phenomenon can be observed in other voluntary schemes. For example, after an illicit torrent of the independent game *McPixel* became widespread, the game's designer, Mikolaj Kaminski, endorsed the torrent with a PWYW plea for donations.[114] Kaminski explicitly framed his actions as a personal gift from an independent developer who understands that not everyone can afford to pay for games.[115] The responses to Kaminski's experiment sometimes (but not often) explicitly reflected a sense of reciprocity: because he encouraged people to download the game for free, Kaminski deserved to be rewarded.[116] Interestingly, in the *McPixel* experiment, the developer explicitly constructed reciprocity as a cycle, where payment by audience members imposed continuing obligations of respect and customer service: "If someone gives me money, I feel obliged to treat him with due respect, especially when it comes for [sic] something he pays for!"[117]

4. Commitment

Finally, people sometimes cooperate on moral grounds. A person who knows that the optimal result of a public goods dilemma is for each person to cooperate may choose to follow an internal rule to co-

113. *See* Regner, *supra* note 89, at 12, 20.

114. Zachary Knight, *The Pirate Bay Pays off for One Enterprising Game Developer*, TECHDIRT (Sept. 18, 2012, 9:36 AM), https://www.techdirt.com/blog/casestudies/articles/20120917/20071120413/pirate-bay-pays-off-one-enterprising-game-developer.shtml ("[E]njoy the game, tell your friends about it, and throw some coins in my general direction if you like it!").

115. Sosowski, Comment to *I Am Sos, Who Made McPixel and Gave out Free Codes on Pirate Bay. Ask Me Anything!*, REDDIT (2012), http://www.reddit.com/r/IAmA/comments/ydn75/i_am_sos_who_made_mcpixel_and_gave_out_free_codes/c5um5xp/ ("I can relate as to why people torrent games . . . I'm not EA or Activision, and that they should buy it if they like it and can afford it. I gave out the codes for people that cannot afford the game, or have no means of buying it.").

116. LegoClaes, Comment to *I Am Sos, Who Made McPixel and Gave out Free Codes on Pirate Bay. Ask Me Anything!*, REDDIT (2012), http://www.reddit.com/r/IAmA/comments/ydn75/i_am_sos_who_made_mcpixel_and_gave_out_free_codes/c5unstg/ ("If you post a discount code for reddit users, I will buy the game without even looking at the video. That's what being a good guy developer gets you.").

117. Sosowski, Comment to *These Kind* [sic] *of Developers Truly Deserve Recognition.*, REDDIT (2012), http://www.reddit.com/r/gaming/comments/ydbdk/these_kind_of_developers_truly_deserve_recognition/c5umbd9/.

operate in those situations.[118] Economic theorist Amartya Sen has forcefully argued that the theory of rational choice should be expanded to include this type of commitment, which is no less rational even if it is not purely self-interested.[119] Many people believe that paying for copyrighted content is the right thing to do, and consumers often prefer to pay rather than free-ride, if given the choice.[120] In the PWYW experiments studied, explicit justifications of this type are less common than others, but there are certainly people who explain that they are motivated to pay because they support the concept or idea of PWYW models: "This is the future of e-goods commerce, and also the solution for a better world; greed makes more greed, selflessness is just awesome."[121]

The disintermediation of creative industries may play a particularly strong role in the commitment that people feel to pay. Public consciousness caricatures large publisher intermediaries as untrustworthy, greedy, faceless corporations. The emergence of new, apparently fairer models of distributing creative works may engender greater levels of support for independent producers amongst those who have grown dissatisfied with existing copyright business models.[122]

C. Summary: A Better Model of the Copyright Consumer

The success of a wide variety of PWYW schemes, although they form only a minority of market transactions, suggests that conventional accounts of copyright are incomplete. Ultimately, decisions to pay are socially constructed, and no single explanation exists for why

118. *See* John C. Harsanyi, *Rule Utilitarianism, Rights, Obligations and the Theory of Rational Behavior*, 12 THEORY & DECISION 115, 122–24 (1980) (outlining a principle of "rational commitment," where an individual adopts a rule-utilitarian strategy that would maximize social utility if followed by all). *But see* Croson, *supra* note 80, at 201 (finding that models of commitment could not explain behavior in laboratory public good experiments).

119. Amartya K. Sen, *Rational Fools: A Critique of the Behavioral Foundations of Economic Theory*, 6 PHIL. & PUB. AFFAIRS 317, 327 (1977) (arguing that economists should accept an expanded view of rationality to include commitment, not just self-interest).

120. *See, e.g.*, Dootson & Suzor, *supra* note 17, at 17–18 (finding that Australian consumers often expressed a strong preference to pay for access to copyrighted goods at a reasonable price over accessing them illicitly).

121. Solidox, Comment to *Pay-What-You-Want Birthday Sale Results*, 2D BOY (Oct. 21, 2009, 3:13 AM) http://2dboy.com/2009/10/19/birthday-sale-results/#comment-16480.

122. Fernando Machado & Rajiv K. Sinha, The Viability of Pay What You Want Pricing 14 (unpublished manuscript) *available at* http://ebape.fgv.br/sites/ebape.fgv.br/files/Working-Paper-Fernando-Machado-Viability-of-Pay-What-you-Want-Pricing.pdf ("[C]onsumers will perceive the act of paying zero (or a very small amount) as being considerably more harmful [to a small local business] . . . than if they were buying from a large national corporation or a chain store."). *But see* Andrew V. Moshirnia, *Giant Pink Scorpions: Fighting Piracy with Novel Digital Rights Management Technology*, 23 DEPAUL J. ART TECH. & INTELL. PROP. L. 1, 44–45 (2012) (noting that justifications for infringement often center on the size and behavior of the publishers, but that rates of infringement are broadly similar across small to large publishers in the games industry).

people choose to cooperate rather than free-ride.[123] The reasons individuals cooperate are highly varied,[124] and it may be difficult to differentiate between self-interested and altruistic cooperation in real world settings.[125] What we do know is that human beings are complex social creatures, and their actions are influenced by social norms.[126] They are also self-interested and will often respond to incentives. Put simply, individuals like to do what they consider to be right, and they like to do what is best for themselves.[127] Whether a given individual will cooperate is a function of their own self-interest, their trust that others will reciprocate, and the complex patterns of social norms that structure and construct their interaction.[128] It is apparent then that the model of the consumer as a rational actor that underpins copyright law, a user who "is trying to get away with paying less than the market price for a particular cultural good,"[129] is misguided. This rational economic model of the user captures only the self-interested motivations of audiences and ignores the messy social factors that underlie decision-making.[130] Understanding the motivations of consumers requires understanding both the incentives presented to individuals and the norms of the group.

IV. EXPLICITLY INTRODUCING FAIRNESS TO COPYRIGHT

Because current copyright business models ignore the role of reciprocity and fairness, the models undermine the legitimacy of copyright law and likely increase rates of free-riding and infringement.[131] Standard discussions about copyright reform focus on deterring in-

123. *See* Belsky et al., *supra* note 59, at 38 (arguing that "human beings have diverse motivational-behavioral profiles").

124. *See, e.g.*, Charles M. Schweik & Robert English, *Preliminary Steps Toward a General Theory of Internet-Based Collective-Action in Digital Information Commons: Findings from a Study of Open Source Software Projects*, 7 INT'L J. THE COMMONS 234, 250 (2013) (discussing the variety of motives that drive software developers to contribute to free open-source software efforts).

125. *See* West et al., *supra* note 71, at 427.

126. *See* Andreoni, *supra* note 104, at 464 ("Clearly social pressure, guilt, sympathy, or simply a desire for a 'warm glow' may play important roles in the decisions of agents.").

127. *See generally* Fehr & Gintis, *supra* note 15 (arguing that neither the model of humans as purely economically or socially motivated explains human behavior, and that instead society consists of a heterogeneous mix of strong reciprocators and self-interested individuals).

128. *See* Ostrom, *supra* note 7474, at 12–13; Roland Bénabou & Jean Tirole, *Incentives and Prosocial Behavior*, 96 AM. ECON. REV. 1652, 1654 (2006) ("[A]gents' prosocial or antisocial behavior reflects an endogenous and unobservable mix of three motivations: *intrinsic*, *extrinsic*, and *reputational*, which must be inferred from their choices and the context.").

129. Julie E. Cohen, *The Place of the User in Copyright Law*, 74 FORDHAM L. REV. 347, 351 (2005).

130. *See id.* at 370–73 (arguing that the law should recognize the "situated user").

131. *See* Litman, *supra* note 46, at 31 ("[T]he deterioration in public support for copyright is the gravest of the dangers facing the copyright law in a digital era.").

fringement through legal penalties and increasing the efficiency of copyright markets.[132] These discussions treat social norms, not as an integral determinant of free-riding, but as a mere reflection of behavior to be changed through the operation of law. Because legal penalties are rare, most recent law reform debate has focused on increasing the severity[133] and regularity of punishments.[134] The problem is that, for the portion of users who do fundamentally want to support producers, an increasingly punitive copyright system is likely to be seen as unfair and may thereby increase their willingness to free-ride. The reputation the music industry has acquired for exploiting artists[135] has already greatly reduced the perceived fairness of copyright business models, and increasing the strength of copyright laws further disconnects the law from practice and social norms.[136] At the same time, the intermediated, transactional nature of digital copyright markets reduces the link between authors and their audiences and likely further diminishes consumer desire to pay.[137] The copyright industries have attempted to shift social norms back in their favor, but their attempts have been somewhat clumsy to date.[138] No wonder then that users often infringe copyright: as the fairness norm around paying for access weakens, people will more often act as rational actors. Since the likelihood of getting caught is still minuscule, free-riding is often the

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132. *See, e.g.*, IAN HARGREAVES, DIGITAL OPPORTUNITY: A REVIEW OF INTELLECTUAL PROPERTY AND GROWTH 30 (May 18, 2011), *available at* https://www.gov.uk/government/publications/digital-opportunity-review-of-intellectual-property-and-growth (emphasizing the importance of licensing and recommending the development of a digital copyright exchange in the UK).

133. *See, e.g.*, Andrew Trotter, *Statutory Damages in Copyright*, 21 AUSTL. INTELL. PROP. J. 219, 234–35 (2010) (discussing the punitive role of statutory damages in copyright).

134. *See* Cohen, *supra* note 53, at 26 (explaining the decentralization of copyright enforcement); Nicolas Suzor & Brian Fitzgerald, *The Legitimacy of Graduated Response Schemes in Copyright Law*, 34 U.N.S.W. L.J. 1, 5–6 (2011) (discussing the attempts to increase the regularity of punishments by pushing responsibility for monitoring and enforcement to private intermediaries in "three-strike" or "graduated response" regimes).

135. *See* Steve Albini, *The Problem with Music*, THE BAFFLER, Nov. 1, 1993, at 31 (describing many of the perceived abuses common in the music industry in the 1980s).

136. *See generally* Jane C. Ginsburg, *How Copyright Got a Bad Name for Itself*, 26 COLUM. J.L. & ARTS 61 (2002) (explaining the role of "greed" in lessening the legitimacy of copyright law); J. Tehranian, *Infringement Nation: Copyright Reform and the Law/Norm Gap*, UTAH L. REV. 537 (2007) (explaining the gap between copyright law and reality).

137. *See* Belsky et al., *supra* note 59, at 54 (suggesting the importance of "fram[ing] the exchange of music as more than a monetary transaction.").

138. While industry campaigns over the last four decades have had some success in shifting attitudes, they have also been the subjects of intense derision, from "Home taping is killing music" in the 1980s to "You wouldn't steal a car" trailers in 2000s. Majid Yar, *Teenage Kicks or Virtual Villainy? Internet Piracy, Moral Entrepreneurship, and the Social Construction of a Crime Problem*, *in* CRIME ONLINE 95, 96 (Yvonne Jewkes ed., 2013) (discussing the social construction and contestation of "piracy" including around home taping of music); James Grimmelmann, *The Ethical Visions of Copyright Law*, 77 FORDHAM L. REV. 2005, 2019–21 (2009) (explaining competing rhetoric in copyright discourse).

rational choice. If copyright law is to be respected and followed, it must reflect a fair social bargain. For copyright policy and industry practice, this likely means less stick and more carrot: focusing less on increasing the deterring effect of copyright law through harsher and more regular enforcement and instead encouraging the non-economic social motivations of audiences to support cultural production.

Some producers in the creative industries have developed a fuller understanding of the mix of these motivations and have experimented with methods of inculcating and supporting prosocial norms amongst their audiences. The rise of crowdfunding provides an excellent example. Producers who run successful crowdfunding campaigns usually have strong networks of fans who fundamentally want to support them[139] and incentives in the form of exclusive rewards or value-added goods and services. Since the launch of Kickstarter, crowdfunding has rapidly become extremely popular.[140] Producers who are able to create strong connections with their fans greatly reduce their risk and cost of borrowing and thereby increase their expected profits.[141]

The art of both providing incentives and supporting reciprocal norms is being learned rapidly, as techniques are refined in experiments all across the creative industries. Highly successful designs in PWYW schemes generally achieve three things: they provide attractive private incentives, they craft social norms that enhance cooperative motives, and they manage to balance the two forces so that private incentives do not crowd out generosity by making cooperators feel like suckers. Belsky, et al., provide a preliminary list of design choices that might be applied in PWYW models to encourage payment including:[142] focusing on developing personal connections with consumers; demonstrating trustworthiness, authenticity, and transparency; developing a sense of fairness, moral obligation, and a social norm of cooperation; providing autonomy; crafting the right mix of rewards and (less commonly) punishments; and leveraging social networks. Distributors like Humble Bundle and producers using crowdfunding sites like Kickstarter are quickly building expertise in combining these techniques to maximize their revenue.

Take, for example, independent game developer Double Fine's crowdfunding campaign for a recently released game, *Broken Age*. Double Fine, led by the legendary game designer Tim Schafer, built

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139. *See* Ajay Agrawal et al., *Some Simple Economics of Crowdfunding*, *in* 14 INNOVATION POLICY AND THE ECONOMY 63, 85 (Josh Lerner & Scott Stern eds., 2013).

140. *See One Billion Dollars*, KICKSTARTER (Mar. 3, 2014), https://www.kickstarter.com/1billion (last visited Dec. 18, 2014) (stating that by March 3, 2014, Kickstarter had raised over $1 billion in pledges by 5.7 million people).

141. *See* Agrawal et al., *supra* note 139, at 70 (arguing that crowdfunding provides artists with "a lower cost of capital, and . . . access to more information").

142. Belsky et al., *supra* note 59, at 51.

on its established reputation and asked the crowd to fund the production of a new adventure game. In the largest successful Kickstarter campaign at the time, Double Fine raised $3.3 million, well above its $400,000 goal.[143] The final game was made available to early backers at a discounted price of $15[144] and opened in wider retail to the rest of the world for $24.99.[145] Through crowdfunding, Double Fine was able to finance an independently produced videogame that apparently would not have been possible to fund through a conventional publisher.[146] Double Fine was able to substantially reduce its risk profile by securing funds in advance through preorders and cross-subsidies; it was then able to supplement this with its own or borrowed funds if necessary, at a greatly reduced risk. Consumers benefited by getting early access to a new game at a discounted price. Potentially, although it is hard to evaluate, the game might also be judged to be better under these conditions — the developer might be able to take more creative risks and deliver a more polished product without the pressures and constraints that publishers bring to game development.[147] Double Fine's engagement with their audience provides a key example of how producers are able to develop mutually beneficial relationships with customers that develop real enthusiasm for backers to pay.

This increased understanding of cooperative norms shows substantial promise for producers in the creative industries who have long been worried about rates of free-riding. Part of the attraction of these models is that they provide endogenous price discrimination[148] — by allowing consumers to select their own price points, they are able to satisfy more consumer demand and potentially capture more consumer surplus than if producers had to pick a single price. The real beauty of these models, though, is that they put fairness at the heart of pur-

143. *See* Patrick Shaw, Double Fine Adventure *Kickstarter Nets $3.3M*, WIRED (Mar. 14, 2012, 3:23 PM), http://www.wired.com/gamelife/2012/03/double-fine-adventure/.

144. Double Fine & 2 Player Productions, *Double Fine Adventure*, KICKSTARTER, http://www.kickstarter.com/projects/doublefine/double-fine-adventure (last visited Dec. 18, 2014).

145. *Buy Broken Age*, BROKEN AGE, http://www.brokenagegame.com/buy/ (last visited Dec. 18, 2014).

146. *See Double Fine Adventure*, KICKSTARTER, *supra* note 144 (in a promotional video, co-creator Tim Schafer explained he was seeking funding through Kickstarter because "if [he] were to go to a publisher right now and pitch an adventure game, they'd laugh in [his] face.").

147. *See* Robin Potanin, *Forces in Play: The Business and Culture of Videogame Production*, PROCEEDINGS OF THE 3RD INT'L CONFERENCE ON FUN AND GAMES 135, 136–37 (2010) (describing pressures on developers from publishers in the games industry, and arguing that "[e]conomics does not encourage diversity in the games industry"). *See generally* Mia Consalvo, *Crunched by Passion: Women Game Developers and Workplace Challenges*, *in* BEYOND BARBIE AND MORTAL KOMBAT 177, 182–85 (Yasmin B. Kafai et al., eds., 2008) (discussing pressures faced by game developers).

148. *See* R. Mark Isaac et al., The Pay-What-You-Like Business Model: Warm Glow Revenues and Endogenous Price Discrimination 3 (May 21, 2010) (unpublished manuscript) *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1612951.

chasing decisions.[149] One of the key threats to the legitimacy of copyright law is the large gap between law and practice.[150] Licensing practices are one of the key drivers of this gap: when consumers do not accept unilateral licensing decisions as a fair bargain, they will often turn to illicit channels to access copyrighted goods.[151] In this case, combating infringement by continuing to increase the punitive force of copyright law may ultimately be counterproductive, since the gap between law and norms will only increase. From the perspective of copyright policy, if voluntary payment models are able to provide sufficiently strong economic incentives and social rewards for payment, they might be able to achieve normative legitimacy in a way that other copyright business models have not been able to.

This movement is well under way. While industry lobby groups are still committed to strengthening copyright domestically[152] and abroad,[153] business practice and copyright reform processes are also starting to converge on limiting free-riding by satisfying consumer demands through appropriate pricing[154] and establishing more efficient markets for rights clearances.[155] The teleology of digital business models in mainstream thought continues to point towards a "celestial jukebox"[156] model of content distribution,[157] embodied in the app stores, digital music stores, and streaming music and video services that enable unprecedented access to the copyright market for

149. It is important to note that many conventional copyright licensing transactions certainly do leverage reciprocity and fairness norms, just not as explicitly. *Id.* at 19 ("consumers' warm glow values are built in to the posted price calculations, and many are purchasing a product for far more than their intrinsic valuation for it").

150. *See* John Tehranian, *Infringement Nation: Copyright Reform and the Law/Norm Gap*, 2007 UTAH L. REV. 537 (2007).

151. *See* Dootson & Suzor, *supra* note 17, at 20 (reporting that where rightsholders and distributors adopt profit-maximizing strategies that create unmet demand in the market — including exclusive licensing practices, high pricing, and low availability — consumers are more willing to infringe copyright).

152. *See, e.g.*, Annemarie Bridy, *Graduated Response American Style: "Six Strikes" Measured Against Five Norms*, 23 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1, 30–33 (2012) (discussing the recently introduced "copyright alert system").

153. *See* Sean M. Flynn et al., *The U.S. Proposal for an Intellectual Property Chapter in the Trans-Pacific Partnership Agreement*, 28 AM. U. INT'L L. REV. 105, 106–08 (2012).

154. *See* Joe Karaganis, *Rethinking Piracy*, *in* MEDIA PIRACY IN EMERGING ECONOMIES 1, 66 (Joe Karaganis ed., 2011) (noting a shift in industry practice towards recognizing piracy as unmet consumer demand).

155. *See, e.g.*, HARGREAVES, *supra* note 132, at 30 (discussing copyright licensing and recommending the establishment of a Digital Copyright Exchange: "It is widely acknowledged that the solution to these difficulties lies in the very technologies that created the problem. Just as digital technologies provide new and exciting ways of using content, they offer a means of transforming the efficiency of licensing . . . . '[T]he answer to the machine is in the machine.'").

156. *See generally* PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX (2003) (introducing the term "celestial jukebox").

157. *See* Nicolas Suzor, *Access, Progress, and Fairness: Rethinking Exclusivity in Copyright*, 15 VAND. J. ENT. & TECH. L. 297, 313–14 (2013).

both consumers and producers.[158] As these forces converge, the arc of copyright seems to be headed inexorably towards this vision of a perfect copyright market — fair and convenient enough to be respected, but strong enough to be feared.[159]

V. "PEACEFUL REVOLUTIONS"

While the use of reciprocity norms is key to increasing the efficacy of current digital distribution models, perfecting the celestial jukebox may not be the best end goal for copyright. It has long been thought that copyright, which provides a property right to exclude free-riders, is the "least objectionable" means of remunerating creators and publishers.[160] The fact that consumers will often voluntarily choose to support creative production indicates that we should seriously reconsider this assumption. In this Part, I suggest that not only are cooperative systems of coordinating cultural production possible, but where they are effective, they are likely to be *better* than conventional copyright systems.

In game theory terms, the decision of individuals to free-ride or to pay for the production of cultural goods is thought of in terms of a prisoner's dilemma,[161] where the dominant strategy is always to "defect" or free-ride.[162] There are two fundamental flaws with this justification for copyright. The first is that cultural production does not have to be a prisoner's dilemma.[163] The tragedy of the commons is a prisoner's dilemma because free-riders end up destroying the pasture through overuse.[164] But since information is non-rival and non-

158. *See generally* Ben Goldsmith, *The Smartphone App Economy and App Ecosystems*, *in* THE ROUTLEDGE COMPANION TO MOBILE MEDIA 171 (Gerard Goggin & Larissa Hjorth eds., 2014), *available at* http://eprints.qut.edu.au/65633/ (describing growth in the apps industry aligned with increase in smartphone and tablet use).

159. Suzor, *supra* note 157, at 301–02.

160. *See* Macaulay, *supra* note 24, at 6 ("It is desirable that we should have a supply of good books: we cannot have such a supply unless men of letters are liberally remunerated; and the least objectionable way of remunerating them is by means of copyright.").

161. In informal terms, a prisoner's dilemma is a thought experiment in game theory wherein the parties would cumulatively be better off cooperating, but each has a strong individual incentive to defect, independently of whether the other cooperates or not. For a formal description, see Anatol Rapoport & Albert M. Chammah, PRISONER'S DILEMMA: A STUDY IN CONFLICT AND COOPERATION 33–36 (1965) (describing the structure of a prisoner's dilemma).

162. *See, e.g.*, Wendy J. Gordon, *Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property*, 17 U. DAYTON L. REV. 853, 869 (1992) (arguing that "[i]f creation is expensive, if access is often easy and copying is usually cheap, and if there are competing creators and copyists, this combination of features is likely to lead to a prisoner's dilemma situation in which legal rights may be required to encourage productive behavior"). *See generally* Russell Hardin, *Collective Action as an Agreeable* n-*Prisoners' Dilemma*, 16 BEHAV. SCI. 472 (1971) (modeling collective action as an n-person prisoner's dilemma).

163. *See* Kollock, *supra* note 108, at 189–90 (noting the "common misunderstanding" of assuming that public goods games are all prisoner's dilemmas).

164. Hardin, *supra* note 28, at 1244.

exhaustible,[165] while free-riders do not contribute towards the costs of production, they do not actually harm others.[166] It is accordingly possible to design schemes where being a sucker by cooperating when others do not is not the worst outcome.

The second flaw in the conventional story, as shown in Part III, is that even when cultural production is a prisoner's dilemma, users do not in fact always free-ride in the way that classical economic theory predicts. The abstraction of the prisoner's dilemma relies on an artifice that the prisoners cannot communicate — or will not trust each other if they can.[167] In fact, humans have long overcome cooperative dilemmas through communication.[168] The mere ability to talk enhances cooperation,[169] allowing participants to build trust by obtaining some form of (unenforceable) social assurances that others will cooperate.[170] By communicating, participants are also able to construct fairness norms amongst themselves — including esteem, guilt, shame, and reciprocal social rewards for cooperation.[171] More formally, by working together, humans can also develop cooperative institutions that develop, monitor, and enforce social norms to increase trust and limit free-riding.[172]

These two points challenge the economic *raison d'être* of copyright law. They imply that it might be possible to use both incentives and reciprocity norms to design alternate systems that can support routine cultural production without excluding free-riders. To the extent that this is true, there is a good chance that cooperative systems are likely to provide better outcomes than conventional copyright systems. Take, for example, musician Amanda Palmer's album, *Theatre is Evil*, which Palmer self-released in 2012 after raising more than $1.19 million in what was, at the time, the most successful music

165. *See* William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 326 (1989).

166. *See* Lemley, *supra* note 2, at 1049 ("If the marginal social cost of benefiting from a use is zero, prohibiting that use imposes unnecessary social costs.").

167. Sally, *supra* note 107, at 59–60.

168. *Id.* at 78 (describing a metastudy of 130 experiments of prisoner's dilemma games involving over 5000 participants, and concluding that communication increases rates of cooperation by approximately forty percent).

169. Ostrom, *supra* note 74, at 9 ("[C]onsistent, strong, and replicable findings are that substantial increases in the levels of cooperation are achieved when individuals are allowed to communicate face to face.").

170. *See generally* Tore Ellingsen & Robert Östling, *When Does Communication Improve Coordination?*, 100 AM. ECON. REV. 1695 (2010) (providing a model that predicts that communication is likely to increase cooperation in certain games, at least where there is no strong temptation for participants to deceive others).

171. Belsky et al., *supra* note 59, at 58–59.

172. *See* Elinor Ostrom, *Building Trust To Solve Commons Dilemmas: Taking Small Steps To Test an Evolving Theory of Collective Action*, *in* GAMES, GROUPS, AND THE GLOBAL GOOD 207, 221 (Simon A. Levin ed., 2009) (discussing the role of context and structure in building trust and reciprocity in collective action).

Kickstarter project ever.[173] Palmer raised enough money through the campaign to allow her to create the album, organize a tour, and produce and deliver the perks backers ordered. Palmer's final profit on the project apparently neared $100,000.[174] Like Double Fine, Palmer relied heavily on both value-added goods and services and a personal relationship with her fans to convince them to pay. Unlike Double Fine, however, once the project was produced, Palmer released it on her website under PWYW terms and a Creative Commons Attribution ShareAlike Non-Commercial license.[175] Having already recouped her costs, Palmer was able to take this move with no risk that she would be out of pocket. The use of PWYW pricing enabled much greater distribution among Palmer's audience. In this model, the social cost of deadweight loss typically associated with monopoly prices is almost eliminated.[176] Palmer's fans personalize this abstract gain, commonly expressing gratitude for being able to access the album for free when they could not otherwise afford it: "right now there is no possible way i can afford your album, even though i want to pay for it so so badly . . . . as soon as things [stabilize], i'm on my feet again, and i have a steady income flowing i will pay you every dollar you deserve."[177]

Strikingly, the proportion of Palmer's fans who chose to support the project do not appear to resent free-riders. These people do not think of themselves as suckers, but instead often express their gratitude to Palmer for enabling them to participate and contribute to the production process.[178] Conceivably, there may be people who do feel like suckers and either did not pledge or did not publicly complain, but the important point is that there were more than enough fans who wanted to be involved to fund Palmer's production costs and the subsequent free release of her album.

While this form of using crowdfunding for the free release of creative works is not as popular as crowdfunding that operates on con-

173. Tom Cheredar, *Amanda Palmer Attracts over $1M in the Biggest Kickstarter Music Deal Ever*, VENTUREBEAT (June 2, 2012, 5:00 AM), http://venturebeat.com/2012/06/02/amanda-palmer-kickstarter-2/.

174. *See* Amanda Palmer, *All You Ever Wanted To Know About All This Kickstarter Money & Where It's Going.*, KICKSTARTER (May 22, 2012), http://www.kickstarter.com/projects/amandapalmer/amanda-palmer-the-new-record-art-book-and-tour/posts/232020.

175. Palmer, *Theatre*, *supra* note 11.

176. *See* Choong Hee Lee et al., *Research on Public Remuneration of Open Content Based on Collective License*, 14 INNOVATION: MGMT., POL'Y & PRAC. 576, 577 (2012) (discussing collective licensing as a means to fund openly licensed content, and arguing that the "major advantage of this institutional change is the removal of the social cost from monopolistic price-conditional access and usage").

177. Kimi Sutcliff, Comment to *Theatre Is Evil Digital*, AMANDAPALMER.NET (2012), http://amandapalmer.net/products/theatre-is-evil-digital/#comment-864542071.

178. *See, e.g.*, Tarena Simon, Comment to *Amanda Palmer: The New Record, Art Book, and Tour*, KICKSTARTER (June 1, 2012), https://www.kickstarter.com/projects/amandapalmer/amanda-palmer-the-new-record-art-book-and-tour/comments?cursor=844391 ("i feel blessed to be a part of such wonderful history").

ventional copyright principles, there are still many other successful examples. A wide variety of producers in various creative industries from around the world have been able to develop cooperative systems of funding professional commons-based cultural production, where the knowledge and cultural goods are made widely available at zero cost (and sometimes on "open"[179] licensing terms that permit almost unlimited modification and reuse). The Spanish site Goteo is a crowdfunding site specifically designed to fund open projects and public goods ranging from renewable energy systems[180] to openly licensed music.[181] Thousands of producers have used other crowdfunding sites to fund openly licensed projects,[182] including recorded and sheet music,[183] textbooks and other educational works,[184] software,[185] and films.[186] Other smaller, purpose-specific commons-

179. Formally, "open" in this context means that the information resources are available at low or zero cost, with little restriction on reuse, modification, or distribution. *See* OPEN DEFINITION, http://opendefinition.org/ (last visited Dec. 18, 2014); *The Free Software Definition*, GNU OPERATING SYSTEM, https://www.gnu.org/philosophy/free-sw.html (last visited Dec. 18, 2014); *cf. Debian Social Contract*, DEBIAN, http://www.debian.org/social_contract (last modified Apr. 29, 2014, 11:26:56 PM UTC) (providing alternate definitions of "free" that pre-date and inspired the Open Knowledge Foundation Network's definition of "open").

180. CITCEA-UPC, *Gasificador Opensource en el Chad: Renewable Electricity Generation by Using Residual Biomass Gasification in the Republic of Chad*, GOTEO, http://goteo.org/project/gasificador-opensource-en-el-chad (last visited Dec. 18, 2014).

181. *See, e.g.*, Sunnare, *Colabora en el Primer Disco de Sunnare: Help Finance Our New Album, "Unlocked"!*, GOTEO, http://goteo.org/project/colabora-en-el-primer-disco-de-sunnare1 (last visited Dec. 18, 2014) (a campaign to fund the production of an openly licensed album by Spain-based band Sunnare).

182. For a list of Kickstarter projects that feature Creative Commons licensing, see *Creative Commons*, KICKSTARTER, https://www.kickstarter.com/pages/creativecommons (last visited Dec. 18, 2014).

183. *See, e.g.*, Aaron Dunn, *Set Chopin Free*, KICKSTARTER, https://www.kickstarter.com/projects/Musopen/set-chopin-free (last visited Dec. 18, 2014) (providing both an online database of public domain sheet music and an effort to record and freely release Chopin's music).

184. *See, e.g.*, Jeremy Hansen, *The Rook's Guide to C++ — A Creative Commons-Licensed Text*, KICKSTARTER, https://www.kickstarter.com/projects/261336366/the-rooks-guide-to-c-a-creative-commons-licensed-t (last visited Dec. 18, 2014) (a successfully funded and complete campaign to provide a computer programming textbook); *Smarthistory: A Multimedia Web-Book About Art and Art History*, SMARTHISTORY, http://smarthistory.khanacademy.org/ (last visited Dec. 18, 2014) (a successfully Kickstarter-funded online history encyclopedia which is free for the public to access and whose entries are Creative Commons-licensed).

185. Better-known projects include nonprofit Facebook alternative Diaspora, which was successfully funded on Kickstarter in 2010 after raising $200,641 against its goal of $10,000 but struggled to attract market success after completion. Maxwell Salzberg, *Decentralize the Web with Diaspora*, KICKSTARTER, http://www.kickstarter.com/projects/mbs348/diaspora-the-personally-controlled-do-it-all-distr (last visited Dec. 18, 2014); *see also Welcome to CFFSW*, CROWDFUNDED FREE SOFTWARE (Jan. 7, 2014), http://cffsw.modernthings.org/ (a database of openly licensed software crowdfunding projects).

186. *See, e.g.*, Bassam Kurdali, *The Tube Open Movie*, KICKSTARTER, https://www.kickstarter.com/projects/1331941187/the-tube-open-movie (last visited Dec. 18, 2014) (a successfully funded "experimental animation").

crowdfunding sites have also emerged, bringing people together to pay the costs of producing open works for the benefit of others.[187]

At a much larger scale, Wikimedia runs an annual fund-raising drive to "keep Wikipedia free"[188] to pay for the ongoing costs of running Wikipedia. Wikimedia's income is derived almost entirely from donations,[189] most of which come from individual donors.[190] In the field of scholarly publishing, universities, learned societies, philanthropic funds, and public grant-making agencies provide substantial support for the costs of publishing over 10,000 open access academic journals, which make more than 1.7 million scholarly articles available for free to the world at large.[191] The Sponsoring Consortium for Open Access Publishing in Particle Physics ("SCOAP^3") project, led by CERN, has brought together a consortium of "more than a thousand libraries, funding agencies and research consortia across the world"[192] and negotiated an agreement with the publishers of ten journals to publish the great majority of research articles in particle physics as open access for three years from 2014.[193] Knowledge Unlatched, a similar project in the humanities and social sciences, has signed up nearly 300 libraries around the world to its pilot program to publish twenty-eight monographs from established presses under open access licenses.[194] Other examples abound in academia, including encyclopedias[195] and news outlets[196] that use collaborative funding

187. *See, e.g.*, UNGLUE.IT, *supra* note 57 (crowdfunding open access book publishing); *The Open Game Art Bundle*, COMMONLY.CC, http://open.commonly.cc/ (last visited Dec. 18, 2014) (crowdfunding the public domain release of computer game art assets).

188. *From Wikipedia Founder Jimmy Wales*, WIKIMEDIA, https://wikimediafoundation.org/wiki/Keep_Wikipedia_Free (last modified Nov. 14, 2011, 10:27 PM).

189. In 2013, $44.7 million of Wikimedia's $48.6 million revenue came from "donations and contributions." *Financial Reports/Financial Statements Ending June 30 2013 and 2012*, WIKIMEDIA, https://wikimediafoundation.org/wiki/Financial_Reports/Financial_Statements_Ending_June_30_2013_and_2012 (last modified Nov. 12, 2014, 4:42 PM).

190. *See, e.g.*, Megan Hernandez, *Wikimedia Foundation Releases Detailed Report on 2012 Fundraiser*, WIKIMEDIA BLOG (June 4, 2013), http://blog.wikimedia.org/2013/06/04/wikimedia-foundation-releases-detailed-report-on-2012-fundraiser/ (reporting over 2 million individual donations during the 2012 and March 2013 Wikipedia fundraising campaign).

191. *See* DIRECTORY OF OPEN ACCESS JOURNALS, http://www.doaj.org/ (last visited Dec. 18, 2014).

192. Richard Van Noorden, *Open-Access Deal for Particle Physics: Consortium Brokers Agreement with 12 Journals*, 489 NATURE 486, 486 (2012).

193. *See Open Access Publishing Initiative, SCOAP^3, To Start on 1 January 2014*, CERN PRESS OFFICE (Dec. 5, 2013), http://press.web.cern.ch/press-releases/2013/12/open-access-publishing-initiative-scoap3-start-1-january-2014.

194. *See* Press Release, Knowledge Unlatched, *supra* note 14.

195. *See* Edward Zalta, *The Stanford Encyclopedia of Philosophy: A University/Library Partnership in Support of Scholarly Communication and Open Access*, 67 COLL. RES. LIBR. NEWS 502, 502 (2006) (describing university and library funding for an online academic encyclopedia).

196. *See The Conversation: 2012 Stakeholder Report*, THE CONVERSATION, https://c15119308.ssl.cf2.rackcdn.com/2012_Stakeholder_Report_The_Conversation.pdf (last visited Dec. 18, 2014).

models to make professionally-produced resources available to the public.

The above are all examples of "peaceful revolutions": systems of production that greatly increase the dissemination of knowledge and culture by flipping copyright business models to cooperative ones.[197] The great promise of these systems is their potential to sustain commons-based models of production for the typical core of costly, mass-market professional production in the creative industries. If they succeed, there is a good chance that cooperative models represent a more efficient and more desirable mechanism of coordinating production than conventional copyright.

A. Cooperation at Scale: Three Structural Changes

So far, we have seen a series of examples of one-off, isolated experiments. Could they work at a larger scale? While the social norms discussed in Part III above (fairness, esteem, guilt, shame, and reciprocity) and selflessness may suffice for small-scale projects, they may not be sufficient to sustain cooperation at scale. Even if there are enough conditional cooperators in a population to routinely fund the costs of large-scale cultural production, behavioral public goods experiments show that while people may cooperate at first,[198] conditional cooperators reduce their contributions over time in the presence of free-riders.[199] Why then would we have any reason to believe that people would voluntarily pay "when they know that their contributions also support hundreds, if not thousands, of free riders?"[200]

In the sections that follow, I explain three categories of structural approaches that suggest that cooperation may be workable at scale and over time for funding commons production in the core of professional cultural production. If people decide whether to free-ride based on both their self-interest and their evaluation of the chance that others will cooperate as well, then increasing cooperation requires targeting their incentives or insulating the cooperators from the free-riders, within a specific project or as facilitated by a formal institution. The first category focuses on encouraging self-interested cooperation by providing incentives for the rational actors who value the goods to

197. SUBER, *supra* note 18, at 142–47 (note that while Suber was specifically discussing large-scale collaborative institutions, the analysis is more broadly applicable).

198. Ostrom, *supra* note 74, at 5 ("Most experimental studies of social dilemmas with the structure of a public-goods provision problem have found levels of cooperative actions in one-shot games, or in the first rounds of a repeated game, that are significantly above the predicted level of zero.").

199. *See* Fehr & Gintis, *supra* note 15, at 50; Fischbacher et al., *supra* note 80, at 401, 403; Herbert Gintis et al., *Explaining Altruistic Behavior in Humans*, 24 EVOLUTION AND HUM. BEHAV. 153, 160–61 (2003).

200. Diane Leenheer Zimmerman, *Authorship Without Ownership: Reconsidering Incentives in a Digital Age*, 52 DEPAUL L. REV. 1121, 1150 (2003).

contribute rather than free-ride. The second examines how cooperators can be protected from free-riders who sap their motivation to participate. The third category considers how groups can build more formal institutions to enable large-scale cooperation over time by creating social norms and enforcement mechanisms that facilitate repeated interactions between relatively stable groups of actors. Each of these methods works because markets for copyrighted goods are malleable social structures that can be modified to enhance cooperation.

1. Economic Incentives To Cooperate

The first route to ensuring that self-interested, rationally-acting people[201] do not spoil the motivations of conditional cooperators is to provide them with incentives to cooperate. Cooperation is then mutually beneficial, as the party who bears the costs of cooperation also derives a direct benefit that outweighs the cost.[202] One of the most common ways to convince consumers to pay for free goods is to cross-subsidize from complementary value-added goods and services.[203] This is at the core of Masnick's "connect with fans + reason to buy" (*CwF + RtB*) algorithm, which relies on using the visibility of infinitely reproducible intangibles to increase demand for scarce goods and services.[204] In both commons and conventional crowdfunding models, for example, backers might get value-added goods or services that are denied to the general public — private or club goods that provide a strong incentive to pay.[205] For creative projects, contributors might get exclusive perks such as limited editions, backstage passes, autographed works, having their name listed in the film credits, and so on.[206] While good data is not available, cross-

201. *See* RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 6–8 (2008) (drawing a distinction between humans and "econs" where "econs" respond to incentives and always behave according to rational economic principles).

202. *See* West et al., *supra* note 71, at 418.

203. *See* Hal R. Varian, Public Goods and Private Gifts (July 11, 2013) (unpublished manuscript), *available at* http://people.ischool.berkeley.edu/~hal/Papers/2013/kick.pdf.

204. *See* Masnick, *supra* note 50 (arguing that content creators should "[s]et the infinite components free, syndicate them, make them easy to get — all to increase the value of the scarce components"); Masnick, *supra* note 48. *See generally* ANDERSON, *supra* note 52 (explaining cross-subsidies in "free" business models).

205. *See* Paul Belleflamme et al., *Individual Crowdfunding Practices*, 15 VENTURE CAPITAL 313, 317 (2013) (contrasting equity- and donation-based crowdfunding with reward-based crowdfunding, which "allows crowdfunders to receive a nonfinancial benefit in return to their financial contributions (e.g., credit on an album, pre-ordering of products or services)").

206. *See, e.g.*, Kappel, *supra* note 54, at 376 (In return for their funding, "financial contributors typically receive 'patronage perks' such as use of their name in the film credits or album liner notes, advanced autographed copies of the work, or backstage access at a performer's show."); Nine Inch Nails, *Ghosts — Order Options*, NINE INCH NAILS: GHOSTS I-IV, http://ghosts.nin.com/main/order_options (last visited Dec. 18, 2014) (Nine Inch Nail's PWYW scheme for *Ghosts I–IV* allowed consumers to pay up to $300 for an ultra-deluxe

subsidies seem to play some important role in encouraging audiences to pay for works they could otherwise get for free. Participants frequently discuss their desires for limited edition goods — this example from a backer of Amanda Palmer's Kickstarter campaign is indicative: "After days of dithering, I just upped my pledge to $125, 'cause I reeeeeeeally want that art book."[207] For people who value the exclusive goods or services, then, cross-subsidies transform the prisoner's dilemma of choosing whether to pay for cultural works into a much less problematic consumer transaction.[208] In cases where demand is high enough, this can be a very successful way to fund the production of open works.[209]

A different approach relies on producers raising funds ex ante and withholding the production or release of free cultural works until a certain threshold has been raised. This is the "Street Performer Protocol":[210] if all goes well, once the threshold has been met, the new work is released to the public for free, to the mutual benefit of creators, publishers, patrons, and, importantly, also to the free-riders who might enjoy the work but did not contribute to its funding. Stephen King provided one of the first high-profile tests of this new model with his serialized novel *The Plant* in 2000.[211] Readers had the option to download each installment for free, but King asked that readers pay at least $1 for each download of the first three installments of the work and at least $2 for each download of the following three installments.[212] King promised that so long as at least seventy-five percent of downloaders continued to pay, he would continue to write installments.[213]

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limited edition package); Amanda Palmer, *Smurf-Tits & Scientology Oh My (The Kickstarter Q&A Part 2)*, KICKSTARTER (May 24, 2012), https://www.kickstarter.com/projects/amandapalmer/amanda-palmer-the-new-record-art-book-and-tour/posts?page=5 (offering not only physical goods and signed limited editions, but also higher rewards such as hosting a party at the home of backers who paid $5000 or holding an art-sitting to paint a canvas portrait of backers who paid $10,000).

207. Valerie Allen, Comment to *Amanda Palmer: The New Record, Art Book, and Tour*, KICKSTARTER (May 31, 2012), https://www.kickstarter.com/projects/amandapalmer/amanda-palmer-the-new-record-art-book-and-tour/comments?cursor=843377.

208. *But see* Farchy, *supra* note 31, at 251 (raising concerns that cross-subsidization models enhance the power of manufacturers and distributors).

209. *But see* Peter K. Yu, *Digital Copyright and Confuzzling Rhetoric*, 13 VAND. J. ENT. & TECH. L. 881, 913 (2011) (doubting the overall impact of cross-subsidies in funding creative projects).

210. *See* John Kelsey & Bruce Schneier, *The Street Performer Protocol and Digital Copyrights*, 4 FIRST MONDAY (June 1999), http://firstmonday.org/ojs/index.php/fm/article/view/673; Kylie J. Veale, *Internet Gift Economies: Voluntary Payment Schemes as Tangible Reciprocity*, 8 FIRST MONDAY (Dec. 2003), http://firstmonday.org/ojs/index.php/fm/article/view/1101.

211. *See* William A. Fischer, *Stephen King and the Publishing Industry's Worst Nightmare*, 13 BUS. STRATEGY REV. 1, 4 (2002).

212. *Id.*

213. *Id.*

King's experiment illustrates how producers can restructure markets for digital goods to escape the prisoner's dilemma. In a prisoner's dilemma, the worst possible outcome is to be a sucker who cooperates when others do not.[214] By contrast, in the Street Performer Protocol, where the good has not yet been produced, the worst possible outcome — at least for fans — is that too many people free-ride and the good is not produced. This is a "snowdrift game," so called because when you are faced with a snowdrift blocking a road, it is better to shovel it out of the way than to do nothing, better still if everyone shovels, best if someone else shovels while you do nothing, and worst for everyone if nobody picks up a shovel.[215]

Unlike the prisoner's dilemma of conventional cultural production, we can expect a positive level of cooperation in ex ante crowdfunding models where the benefit of getting access to the final product outweighs the cost of being a sucker.[216] Fans of Stephen King's work who want to see *The Plant* produced, for example, have a strong incentive to pay King's ransom. Their best strategy is to sometimes voluntarily pledge, with a probability that takes into account the cost/benefit ratio and the number of other people who also need to pledge for the project to succeed.[217]

Wikipedia provides an interesting example of a very successful Street Performer Protocol. Each fundraising campaign, Wikimedia representatives — and particularly the founder, Jimmy Wales — make credible threats that if sufficient donations are not received, Wikimedia may be forced to run advertisements or charge for access to pay Wikipedia's ongoing costs.[218] Each year so far, Wikimedia has exceeded its fundraising targets, suggesting that users are willing to bear costs to "keep Wikipedia free."[219]

These examples show two forms of incentives that should be able to raise rates of participation in one-shot interactions. While Wikipedia has been wildly successful, Stephen King's experiment ended

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214. Hardin, *supra* note 162, at 473–74.

215. D.F. Zheng et al., *Cooperative Behavior in a Model of Evolutionary Snowdrift Games with N-Person Interactions*, 80 EPL 18002, 18002-p1 (2007); Kollock, *supra* note 108, at 187–90; Irwin Lipnowski & Shlomo Maital, *Voluntary Provision of a Pure Public Good as the Game of "Chicken,"* 20 J. PUB. ECON. 381, 384 (1983) (describing so called "chicken" games, when you gain the most if the oncoming truck swerves and you do not have to go out of your way to avoid it, but lose the most in the ensuing crash when both people choose to not to swerve).

216. *See* Marco Archetti & István Scheuring, *Game Theory of Public Goods in One-Shot Social Dilemmas Without Assortment*, 299 J. THEORETICAL BIOLOGY 9, 10 (2012); Michael Doebeli & Christoph Hauert, *Models of Cooperation Based on the Prisoner's Dilemma and the Snowdrift Game*, 8 ECOLOGY LETTERS 748, 748 (2005).

217. *See* Archetti & Scheuring, *supra* note 216, at 17 (discussing optimal strategy in an *n*-person volunteer's dilemma).

218. Mak et al., *supra* note 97, at 2–3 (arguing that "PWYW can transform a private good . . . into a public good").

219. *See* WIKIMEDIA, *supra* note 188.

sourly: King eventually canceled the project after pay-through rates for the fourth installment dropped to forty-six percent.[220] *The Plant* was never published, and both King and his audience were disappointed. This might go some of the way to explaining why few high-profile producers have tried this model since. Theoretically, however, using one or both approaches — ex ante funding and value-added goods and services — should be sufficient to increase rates of participation amongst the group of participants who would usually free-ride.

2. Insulating Cooperators Through Positive Assortment

Conditional cooperators do not like being suckers.[221] While people may be happy to cooperate when others do, in a well-mixed population, cooperation is difficult because cooperators are surrounded by free-riders who will take advantage of their generosity.[222] Importantly, however, our cultural landscape is not well-mixed. The structure of a producer's social network is likely to have a strong effect on rates of cooperation.[223] Everything else being equal, the lower the proportion of free-riders in any given group, the higher rates of cooperation are likely to be.[224] Simulations suggest that high thresholds of cooperation will be easier to achieve where social network connectivity is low and cooperators do not have to interact with a large number of free-riders.[225] By insulating cooperators from free-riders, small communities may also increase the likelihood that prosocial norms will emerge and become accepted, as compared to large, heterogeneous networks where these norms may be more actively contested.

The implication is that voluntary payment schemes based on reciprocity are much more likely to be successful if participants feel as if they are interacting directly with the artist-producer or with a select in-group of cooperators. It might be that in many cases, the sense of a personal connection would be sufficient to encourage participants to pay despite the fact that a broader mass of people choose to free-ride. When Amanda Palmer spoke about the relationship between her and

220. *See* David D. Kirkpatrick, *A Stephen King Online Horror Tale Turns into a Mini-Disaster*, N.Y. TIMES, (Nov. 29, 2000), *available at* http://www.nytimes.com/2000/11/29/business/a-stephen-king-online-horror-tale-turns-into-a-mini-disaster.html.

221. *See* Gordon, *supra* note 84, at 746, and accompanying text.

222. *See* Fischbacher et al., *supra* note 80, at 397, 403.

223. *See generally* Lars Carlsson & Annica Sandström, *Network Governance of the Commons*, 2 INT'L J. COMMONS 33 (2008) (discussing the importance of social network structures to successful collective action in natural resource commons).

224. *See* Devesh Rustagi et al., *Conditional Cooperation and Costly Monitoring Explain Success in Forest Commons Management*, 330 SCIENCE 961, 962 (2010) (reporting that cooperation in forest management in Ethiopia was lower in groups with higher proportions of free-riders).

225. Hisashi Ohtsuki et al., *A Simple Rule for the Evolution of Cooperation on Graphs and Social Networks*, 441 NATURE 502, 504 (2006) ("In particular, more cooperation should emerge if connectivity is low."); *see also* Corina E. Tarnita et al., *Evolutionary Dynamics in Set Structured Populations*, 106 PROC. NAT'L ACAD. SCI. U.S. 8601, 8603 (2009).

the 25,000 fans who backed her record, and about the perceived fairness of the bargains between them, she spoke in terms of a fairness negotiated within a community. She clearly differentiates a consensual norm between the in-group and the mounting criticism by a larger, external group of commentators who saw her relationship with fans and collaborators as exploitative: "[The critics] weren't with us . . . , and they couldn't see the exchange that was happening between me and my crowd, an exchange that was very fair to us but alien to them."[226]

Palmer's fans appeared to react directly and positively to the connection they felt to her; many expressed their love and gratitude, which Palmer occasionally reciprocated. The connection felt by fans was palpable — for example, this comment is illustrative: "You're what a real rock star should be, someone who loves their fans as much as their fans love them."[227] It would seem that many of Palmer's backers, when they are thinking about reciprocity, are not thinking about abstract free-riders who will take advantage of them, but of Palmer herself, whom they just want to support. That fans feel such love for artists should not come as a surprise, and it is by no means certain that a fan who supports a new production from their favorite artists would necessarily feel aggrieved if others were able to access that work for free.

We see similar phenomena in communities of cooperators who are able to develop a strong sense of identity and shared purpose. Commons projects sometimes use this to great effect by creating an in-group[228] of cooperators from around the world, where prosocial norms can be created that encourage cooperation in the face of large rates of free-riding amongst the broader community.[229] In a natural resource commons, where resources are finite collective goods, limiting the proportion of free-riders is crucial because free-riders leave everyone else worse off.[230] In information commons, on the other hand, the extent to which cooperators within each of these groups

226. *Amanda Palmer: The Art of Asking*, TED (Feb. 2013), http://www.ted.com/talks/amanda_palmer_the_art_of_asking.

227. *See* Meg Regine, Comment to *Amanda Palmer: The New Record, Art Book, and Tour*, KICKSTARTER (June 6, 2012), https://www.kickstarter.com/projects/amandapalmer/amanda-palmer-the-new-record-art-book-and-tour/comments?cursor=870202.

228. *See* Belsky et al., *supra* note 59, at 39–40 ("There is work in social psychology and neuroscience on social preferences, such as empathy and solidarity, or in-group bias . . . all of which provide different perspectives on why we cooperate, and what aspects of the systems we inhabit influence the degree to which we cooperate.").

229. *See, e.g.*, E. GABRIELLA COLEMAN, CODING FREEDOM 12 (2013) (explaining the way in which prosocial sharing norms are developed and maintained through extensive initiation and public debate in the Debian free software project).

230. *See* ELINOR OSTROM, GOVERNING THE COMMONS 91 (1990) ("At the least, those who invest in the [common pool resources] may not receive as high a return as they expected. At the worst, the actions of others could destroy the resource itself." Excluding free-riders is thus necessary to preserve the resource.).

feels aggrieved by free-riders is largely a matter of perspective, and this can be heavily mediated by the group. Wikipedians and free software developers, for example, do not feel like suckers in the face of huge numbers of people who benefit from their work but do not contribute to the community. Some of these groups do feel aggrieved when commercial users free-ride and do not reciprocate,[231] but others develop different norms that support almost unlimited free-riding.[232]

Similar principles are likely to apply for groups specifically designed to fund the open production of cultural works. Unglue.it, for example, is a crowdfunding platform that allows users ("ungluers") to contribute to the costs of publishing open access books. Unglue.it's website proclaims its mission is to "share their books with the world,"[233] and the narratives used to sell books are explicitly framed in terms of providing the benefits of a particular book to others.[234] While more research remains to be done, it seems reasonable to suggest that if cooperators are able to self-select into sets where either they rarely have to interact with free-riders or where they can develop prosocial norms that actually encourage free-riding, the *proportion* of cooperators may not be as important as their *absolute* number and degree to which they are able to cluster together.[235] The long-tail effect of the Internet is also likely to help here, enabling producers to reach a much wider audience and larger numbers of people with eclectic tastes, potentially making viable projects that could not be funded in conventional markets.[236] In theory at least, at any given

231. The main innovation of the GNU General Public License ("GPL") was to prevent this form of free-riding by developing a "copyleft" norm, which effectively discriminates between commercial users who create new works but share their improvements back with the community and those who do not. *See* Brian Fitzgerald & Nicolas Suzor, *Legal Issues for the Use of Free and Open Source Software in Government*, 29 MELB. U. L. REV. 412, 413–14 (2005); Clark D. Asay, *The General Public License Version 3.0: Making or Breaking the Foss Movement?*, 14 MICH. TELECOMM. & TECH. L. REV. 265, 276 (2008) (describing changes to further limit forms of free-riding, including "Tivoization," in the later Version 3 of the GPL).

232. *See* Stefano De Paoli et al., *Free and Open Source Licenses in Community Life: Two Empirical Cases*, 13 FIRST MONDAY (Oct. 6, 2008), http://firstmonday.org/ojs/index.php/fm/article/view/2064/203 (discussing the way in which licensing norms are negotiated in free software communities).

233. UNGLUE.IT, *supra* note 57.

234. *See, e.g.*, *The Digital Public Domain: Foundations for an Open Culture*, UNGLUE.IT (last visited Dec. 18, 2014), https://unglue.it/work/136338/ ("[Open Book Publishers] believe[s] that knowledge is for sharing. We are a non-profit, Open Access publisher, committed to making high-quality research freely available to readers around the world.").

235. *See* Ostrom, *supra* note 74, at 13 ("Contingent agreements do not need to include all those who benefit. The benefit to be obtained from the contribution of *Y* proportion of those affected may be so substantial that some individuals are willing to contribute so long as *Y* proportion of others also agree and perform.").

236. *See* CHRIS ANDERSON, THE LONG TAIL: WHY THE FUTURE OF BUSINESS IS SELLING LESS OF MORE 19–24 (2006); Max O. Souza et al., *Evolution of Cooperation Under N-Person Snowdrift Games*, 260 J. THEORETICAL BIOLOGY 581, 581–82 (2009) (developing a model that predicts that successful cooperation may be more likely when the threshold is can be met by a small proportion of the population, although coordination costs increase).

threshold, a larger group will more easily form a critical mass, since a larger number of people will place a disproportionately high value on the good.[237]

3. Cooperative Institutions: Large-Scale, Stable Cooperation over Time

Most of the experiments discussed so far are one-shot: they provide an open offer to a large number of people, some of whom choose to cooperate for a specific purpose. If the number of people who choose to pay is sufficiently large, the project is successful. While these models may work for individual projects, they may not always provide a predictably stable model of funding for large-scale sustained productions. By changing the rules of the game, groups of individuals can change prisoner's dilemmas into forms that enable cooperation at scale and over time.[238]

Groups can institute various mechanisms — particularly, social rewards and punishments — to discourage free-riding and encourage cooperation.[239] The study of collective action in natural resource commons (e.g., fisheries, forestry, irrigation water, grazing land) has shown that there are generalizable characteristics of the institutional structures and rules that enable successful, long-term cooperation.[240] While we do not yet have comparable long-term data, there is good reason to believe that similar rules might apply for maintaining cooperation in the production of knowledge goods.[241] While the nature of the goods that are produced, managed, and shared among communities differs significantly between natural resource commons and information commons, the patterns of institutional structures that enable humans to cooperate are likely to have many shared characteristics.

The SCOAP^3 and Knowledge Unlatched systems are examples of complex negotiated arrangements designed to sustain long-term coop-

237. *See* GERALD MARWELL & PAMELA OLIVER, THE CRITICAL MASS IN COLLECTIVE ACTION: A MICRO-SOCIAL THEORY 52 (Jon Elster & Michael S. McPherson eds., 1993) ("[T]he expected number of individuals who are willing and able to give at any specific contribution level will always be higher for a larger group.").

238. *See* Ostrom, *supra* note 74, at 8 ("Extensive research on how individuals have governed and managed common-pool resources has documented the incredible diversity of rules designed and enforced by participants themselves to change the structure of underlying social-dilemma situations.").

239. *See* David G. Rand et al., *Positive Interactions Promote Public Cooperation*, 325 SCIENCE 1272, 1272 (2009) (finding that in public goods games, rates of participation and average payoffs were higher when participants could reward other participants for cooperative behavior than when participants only had the choice to punish or defect).

240. *See* OSTROM, *supra* note 230, at 58–93, 143–81.

241. *See* Charlotte Hess & Elinor Ostrom, *Introduction* to UNDERSTANDING KNOWLEDGE AS A COMMONS: FROM THEORY TO PRACTICE 3, 14–15 (Charlotte Hess & Elinor Ostrom eds., 2007); Michael J. Madison et al., *Constructing Commons in the Cultural Environment*, 95 CORNELL L. REV. 657, 657 (2010).

eration. In each case, because the materials that libraries pay for are ultimately released for free to the public at large, each individual library has an incentive to free-ride rather than cooperate. In order to be successful, libraries, like individual users, need both rational incentives (in the form of current or future savings) and some assurance that they will not be unfairly subsidizing the costs of publishing while other institutions free-ride. Both schemes are set against a background social imperative to make academic research as broadly available as possible.[242] Both schemes are also set in opposition to a particularly pressing set of problems: the rapidly increasing costs of journal subscriptions[243] and the crisis in humanities publishing caused by increasing costs and shrinking sales of monographs and preventing scholars from disseminating their work.[244] Both models rely on libraries, as the key purchasers of academic publishing, to commit to a new structure in the hope of providing a better long-term publishing model. Knowledge Unlatched also provides clear incentives; libraries are offered books at a per-title cost of sixty dollars or less (significantly lower than standard prices for academic books) and offered discounts for each book they have already purchased in hardcopy or electronic versions.[245] SCOAP^3, by contrast, attempts to limit free-riding through a complex scheme that creates thresholds for funding levels in each country according to their share of global physics outputs.[246] Both the SCOAP^3 and Knowledge Unlatched projects have successfully launched initial pilot programs.[247] While their long-term sustainability has not yet been proven, the fact that both projects have been able to secure agreements from hundreds of libraries is extremely promising.[248]

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242. *See* JOHN WILLINSKY, THE ACCESS PRINCIPLE: THE CASE FOR OPEN ACCESS TO RESEARCH AND SCHOLARSHIP *xii* (William Y. Arms ed., 2006) (reasoning that "[a] commitment to the value and quality of research carries with it a responsibility to extend the circulation of such work as far as possible and ideally to all who are interested in it and all who might profit by it") (emphasis removed).

243. *See, e.g.*, Harvard Faculty Advisory Council, *Faculty Advisory Council Memorandum on Journal Pricing: Major Periodical Subscriptions Cannot Be Sustained*, HARVARD UNIVERSITY (Apr. 17, 2012), http://isites.harvard.edu/icb/icb.do?keyword=k77982&tabgroupid=icb.tabgroup143448 (arguing that rising journal subscription costs are unsustainable even for extremely well-funded research libraries); Martha Kyrillidou & Shaneka Morris, *ARL Statistics 2008–2009* 11 (Ass'n Res. Libr. 2011) (reporting a 381% increase in journal subscription costs and an 87% increase in monograph acquisition costs from 1986 to 2009).

244. *See* TOBY MILLER, BLOW UP THE HUMANITIES 52, 51 (2012).

245. *How It Works*, KNOWLEDGE UNLATCHED, http://www.knowledgeunlatched.org/about/how-it-works/ (last visited Dec. 18, 2014).

246. BIANCO ET AL., *supra* note 13, at 20.

247. *SCOAP^3 Repository Launches in Beta*, SCOAP^3 (Feb. 17, 2014) http://scoap3.org/news/scoap3-repository-launches-in-beta.html; *Pilot Project*, KNOWLEDGE UNLATCHED, http://www.knowledgeunlatched.org/about/pilot-project/ (last visited Dec. 18, 2014).

248. *See Current Partners*, SCOAP^3, http://scoap3.org/participating-countries (last visited Dec. 18, 2014); Press Release, Knowledge Unlatched, *supra* note 14.

There are other important examples in the educational sector. The *Stanford Encyclopedia of Philosophy* is funded through a combination of philanthropic grants and university library donations.[249] *The Conversation*, an Australian not-for-profit online news publication, provides public access to professionally edited academic commentary and analysis.[250] *The Conversation* is funded by philanthropic and government grants and partner universities.[251] Universities have a strong incentive to see the work of their academics published to a broad audience, but the dominant strategy for any given university is likely to be to free-ride, since *The Conversation* does not limit submissions to partner institutions.[252] The fact that universities do choose to fund *The Conversation* shows that it is successful, even if some institutions free-ride by submitting the work of their academic authors without becoming a partner.

Each of these institutional collective action approaches, both within and outside academia, promises a great potential for creating sustainable commons-based production processes. The mechanisms for such large-scale cooperation, however, have not been extensively tested or studied. It is by no means clear what types of commons-based information production can be funded by private consortia, or how sustainable or scalable cooperation can be. Clearly, however, institutional cooperation is already working to fund some forms of open cultural production, and there is substantial demand, at least in academia, for large-scale experiments with commons-based funding mechanisms.

B. A Hypothesis: Commons-Based Systems Outperform Conventional Copyright Systems

There is sufficient evidence to demonstrate that cooperative systems for coordinating cultural production are able to operate across a variety of creative industries at a diverse range of scales. The experiments attempted so far provide ample proof of concept for the proposition that these models can be successful. The outstanding questions are now about the extent to which these models can stretch and the implications they may present for copyright doctrine and policy.

In order to explore the limits and implications of cooperation, I propose a hypothesis: commons-based systems of coordinating creative production are likely to outperform conventional copyright systems on measures of efficiency, fairness, and potential for human

249. Zalta, *supra* note 195, at 503.

250. *Who We Are*, THE CONVERSATION, http://theconversation.com/uk/who-we-are (last visited Dec. 18, 2014).

251. THE CONVERSATION, *supra* note 196196.

252. *See Complete Three Short Steps and You'll Be Set To Write*, THE CONVERSATION, https://theconversation.com/become-an-author (last visited Dec. 18, 2014).

flourishing. These three criteria encapsulate a particular view of copyright that focuses on its instrumental goal to "promote *the Progress* of *Science* and useful Arts."[253] Economic efficiency measures the ability of copyright to fulfill its core function of coordinating investment in cultural production. Beyond efficiency, part of the reason we care about copyright is our commitment to treating authors fairly.[254] The final criterion provides a more substantive evaluation of the role of copyright in our society in promoting equality and freedom.[255] Progress itself is not a fundamental good; rather, copyright is important because of the role it plays in helping people learn, play, and express themselves through culture.[256] Unlike efficiency, this last criterion is sensitive to quality of expression, distributional concerns about cost and access, and the rules that limit how expression may be used and reused. Together, these criteria provide a more substantive consequentialist evaluation of the role of copyright in supporting a just and attractive culture.

1. Efficiency

Copyright is fundamentally and intractably inefficient. Structurally, it allows producers to recoup their costs by enabling them to exclude those who cannot afford to pay the price they set. By transforming expression from a public good into a private good, copyright necessarily limits the distribution of knowledge and culture throughout society.[257] Because excluding free-riders comes at such a heavy cost,[258] copyright "is a second best solution to market failure [but] there is no first best answer."[259] Within the paradigm of copyright law, while it is possible to optimize the balance between incen-

253. U.S. CONST., art. I. § 8, cl. 8.

254. *See* Wendy J. Gordon, *An Inquiry into the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory*, 41 STAN. L. REV. 1343, 1439 (1989) (discussing the role of "desert" in copyright: "while desert may not be the only component of justice, it does have a weight that deserves respect"); Jessica Litman, *Sharing and Stealing*, 27 HASTINGS COMM. & ENT. L.J. 1, 32 (2004) (discussing the role of fairness in copyright).

255. *See generally* MARTHA C. NUSSBAUM, CREATING CAPABILITIES: THE HUMAN DEVELOPMENT APPROACH (2011); AMARTYA SEN, DEVELOPMENT AS FREEDOM (1999).

256. *See* Julie E. Cohen, *Creativity and Culture in Copyright Theory*, 40 U.C. DAVIS L. REV. 1151, 1151 (2007) (discussing the creative process of artists and society's creation of copyrights to protect creativity without a clear understanding of what creativity requires).

257. *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, *in* THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609, 616–17 (1962).

258. *See* Lemley, *supra* note 2, at 1049. *But see* Brett M. Frischmann & Mark A. Lemley, *Spillovers*, 107 COLUM. L. REV. 257, 257 (2007) (arguing that economic externalities are good for society).

259. Ruth Towse, *What We Know, What We Don't Know and What Policy-Makers Would Like Us To Know About the Economics of Copyright*, 8 REV. ECON. RES. ON COPYRIGHT ISSUES 101, 105 (2011).

tives and access to an extent, there is always a trade-off, and underutilization (deadweight loss) is unavoidable.[260] Ultimately, it becomes impossible to increase access to information goods without diminishing the incentives to invest in the production of new works — a self-defeating strategy.[261]

Commons-based models of cultural production, when they are successful, avoid the costly trade-off between incentives and access.[262] As compared to monopoly pricing under traditional copyright models, the potential benefits of making information goods available at their marginal cost of distribution (almost zero in the case of digital goods) are immense. The use of open licensing for copyrighted works enables widespread and practically unlimited dissemination and reuse of knowledge and cultural goods. Openly licensed goods also greatly reduce the transaction costs involved in seeking permission to use and reuse copyrighted works.[263] Systems of production that are less reliant on copyright are likely to incur monitoring and enforcement cost. Easier access to creative content — lower prices and lower transaction costs — and a reduction in the power of established intermediaries to control distribution can also create opportunities for businesses who add value through disruptive innovation around interactions with existing content.[264]

Under the "Pareto efficiency" test, a system is said to be more efficient than another if some people are made better off while nobody is made worse off.[265] For example, the attempts by SCOAP[3] and

260. *See* Landes & Posner, *supra* note 27, at 326 ("Copyright protection . . . . trades off the costs of limiting access to a work against the benefits of providing incentives to create the work in the first place. Striking the correct balance between access and incentives is the central problem in copyright law.").

261. *See* Stan J. Liebowitz & Stephen Margolis, *Seventeen Famous Economists Weigh in on Copyright: The Role of Theory, Empirics, and Network Effects*, 18 HARV. J.L. & TECH. 435, 440–41 (2005) ("A system of private ownership providing the incentive for creation cannot give a reward to the creator without also having an apparent deadweight loss in the consumption market."); Suzor, *supra* note 157, at 310 ("If copyright incentives are necessary to produce creative expression, and greater incentives lead to more production, then reducing deadweight loss by decreasing copyright protection in order to increase access necessarily means reducing production.").

262. *See* Suzor, *supra* note 157, at 333–35 (arguing that systems that encourage abundance in access to knowledge and culture provide greater social benefits and more fair outcomes than conventional copyright systems).

263. *Cf.* Breyer, *supra* note 30, at 316–18.

264. Gerhard Satzger & Andreas Neus, *Principles of Collaborative Innovation: Implementation of Open and Peer-to-Peer Innovation Approaches*, *in* INNOVATION AND INTERNATIONAL CORPORATE GROWTH 219, 223–24 (Alexander Gerybadze et al. eds., 2010); BRETT M. FRISCHMANN, INFRASTRUCTURE: THE SOCIAL VALUE OF SHARED RESOURCES 253 (2012). *See generally* Raymond Shih Ray Ku, *The Creative Destruction of Copyright: Napster and the New Economics of Digital Technology*, 69 U. CHI. L. REV. 263 (2002) (discussing the disruptive innovation of filesharing technologies and their potential impact on copyright law).

265. For a discussion of Pareto efficiency, see Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1094–98 (1972).

Knowledge Unlatched to flip existing copyright production models to cooperative systems are likely Pareto-improvements if they work. Where existing budgets can be redirected through collective action, publishers are able to reduce risk and maintain (potentially appropriately discounted) profits, libraries and institutions are left in a similar position, and the public gains a great deal through open access to scholarly works.

Because the test forbids redistribution (no person may be made worse off),[266] not all commons models will be Pareto-improvements. Almost all, however, are likely to be Kaldor-Hicks efficient improvements. An outcome is said to be more efficient under the more relaxed Kaldor-Hicks criteria if any loss experienced by people made worse off is less than the gain experienced by those who are made better off.[267] The winners must be theoretically able to fully compensate the losers, although there is no practical requirement to do so.[268]

Amanda Palmer's Kickstarter campaign, for example, is probably an improvement over Double Fine's *Broken Age* campaign. In each of these cases, since consumers only pay what they want, we can assume that they are always getting a positive result. The benefits to the members of the public who are able to free-ride and receive access that they would not otherwise get, on the other hand, are quite substantial. By releasing her work under a Creative Commons license, Palmer enables much greater social value and downstream innovation than if she had, like Double Fine, continued to sell restrictive licenses to the work.[269] On the producer's side, it is impossible to say whether Palmer could have earned more by not making her album shareable — her PWYW revenue may or may not be less than the counterfactual. If she is no worse off, the result is a Pareto-improvement — some are better off, and nobody is worse off. Importantly, however, even if she is personally worse off, the result is likely to be a Kaldor-Hicks improvement. Once Palmer has received enough money to produce the album and make a reasonable profit, from the incentives perspective of copyright theory, any further gains are unproductive monopoly rents. Reducing the potential rents Palmer can extract, once the album has already been produced, merely adds to the consumer surplus.[270]

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266. *See generally* Robert Nozick, *Distributive Justice*, 3 PHIL. & PUB. AFF. 45 (1973) (discussing the prohibition against redistribution).

267. *See* Jules L. Coleman, *Efficiency, Exchange, and Auction: Philosophic Aspects of the Economic Approach to Law*, 68 CALIF. L. REV. 221, 239 (1980) ("A redistribution of resources is Kaldor-Hicks efficient if and only if under the redistribution the winners win enough so that they could compensate the losers. The notion of Kaldor-Hicks efficiency does not require that the winners actually compensate the losers.").

268. *Id.*

269. *See generally* Frischmann & Lemley, *supra* note 258 (discussing the positive externalities of creativity and the limits imposed by property rights).

270. *See* Lemley, *supra* note 2, at 1046–47.

Similarly, if Double Fine were able to raise an amount through PWYW or crowdfunding that enabled it to achieve profits greater than or equal to the likely profits it could expect over the life of *Broken Age*, releasing it under an open license would be a Pareto-improvement. If Double Fine were to raise less than their total expected profits, but more than the amount required to make the game, this would likely be a Kaldor-Hicks improvement. Only if Double Fine could not raise enough money to produce the game through voluntary payments would it potentially be a worse outcome.

For the same reasons, Palmer's model is, in isolation, superior to a conventional copyright production system. If a voluntary payment mechanism can raise enough funds to cover the producer's fixed costs of production plus a reasonable profit, it will in almost all cases be more efficient than a system that enables an investor to obtain monopoly rents. In efficiency terms, at least when we only consider individual productions in isolation, successful commons-based models must be more efficient than conventional copyright-based approaches. Importantly, however, these systems rely on producers making a distinct choice to potentially limit their revenue in order to generate greater public benefits. This suggests a key role for policy in providing incentives to encourage individuals and corporations to use these systems if they do turn out to be systematically more efficient.

Whether these systems are more efficient ultimately depends on whether they are able to successfully fund a sufficient level and diversity of cultural production. Much more research is required to understand their complex effects. Some forms of cultural production may be more suited to voluntary payment schemes than others. Successful voluntary schemes tend to have loyal followings; the highly popular works of mass culture and niche producers with strong but small fan bases might be able to reliably raise the funds they need for their production on a voluntary basis. These schemes have not yet been proven at the very largest scales of cultural production — the blockbuster films or videogames that require an initial investment of many millions of dollars. It is also not yet clear that there is sufficient audience loyalty to support the bulk of mass media in the middle range. For the proportion of content that is marginal — just breaking even or providing modest returns — PWYW or crowdfunding schemes may not work. They may also not work for socially valuable cultural content that does not enjoy a sufficiently strong market and has historically been supported by public subsidies.[271] Similarly, for content that is currently predominantly funded by advertising revenue rather than consumer licensing, audiences may not be sufficiently loyal to support a shift in business model, although endorsement and advertising may

271. *See* discussion in note 33, *supra*.

still play a crucial role in funding open content. If these schemes reduce monopoly rents, they will also reduce the ability of producers to invest the rents from one work into producing others works which are not commercially successful, further limiting the production of more marginal works. There are also likely to be many crowdfunded projects that are only partially funded in advance. For these projects, the amounts raised in advance might give producers sufficient assurance that a market exists to invest more money into production, in the hope of recouping that investment through copyright licensing; these projects may not be viable under a commons production model. Conversely, an ex-ante crowdfunding model enables producers to fail much more cheaply. If the market is not prepared to pay, instead of losing the entire production and marketing budget, their loss is limited to pre-production costs and the costs of running the crowdfunding campaign.

Finally, some of the success in PWYW schemes can be attributed to the novelty of the model, which will likely to diminish if PWYW becomes more common. As we have seen, some people are motivated to pay in part to reciprocate a producer's kind act in making their work available for free. This must be understood against a background of private licensing as the normal mode of distribution. If this background changes, a producer's decision to use PWYW may be given less weight. At the same time, amounts voluntarily chosen are often anchored to a reference point for traditional licensing models. As PWYW becomes more common and more material is available legitimately for free or very cheaply, there is at least a suggestion that people may come to value digital goods less, and the amount they are willing to pay will accordingly decrease. These implications are as yet untested.

There is sufficient reason to believe that commons-based voluntary payment mechanisms might be more efficient than traditional copyright-based production models. In terms of individual experiments, we have seen that voluntary payment works across a number of different creative industries and over a broad range of levels, from small- to medium-scale productions. What is missing is an understanding of how voluntary payment mechanisms might work at scale, and how they interact with other mechanisms of funding cultural production. The evaluation of efficiency must examine the systemic impact of these systems, rather than a one-off comparison of successful productions. More research is accordingly required to understand the circumstances in which voluntary payment systems are likely to work and the likely effects of an increased proportion of commons-based systems on the creative industries as a whole.

2. Fairness and Human Flourishing

Efficiency, by itself, is an insufficient measure to inform policy choices.[272] Both short-term distributional effects and long-run effects on society are important. "[C]reative destruction," as Julie Cohen says, "is nicest for those who do not have to undergo it."[273] Accordingly, when evaluating commons-based systems of cultural production, we must consider the implications for the producers who may be worse off in the short-term, as well as the systemic implications for the abstract public in the long-term.

a. Distributional Effects on Producers

In terms of short-run winners and losers, the distributional effects of more widespread use of commons-based systems of production require investigation. There are two main groups of distributional concerns: first, some genres, sectors, or industries may be more amenable to voluntary payment schemes than others; and second, within these groups, producers may earn less on average or be subject to more skewed distributions of revenue under voluntary payment schemes than they would under copyright systems. In terms of distributional effects between different producers, some forms of production are likely to be much more successful than others,[274] but we simply do not have the data yet to be sure.

As for average payment and distribution of revenues, the answer is also unclear, but there is a colorable argument that the majority of producers will not be worse off. Except for the systems like SCOAP[3] and Knowledge Unlatched that simply redirect existing payments from conventional copyright licensing to fund commons-based production, it is likely that producers in voluntary payment systems will, on average, forgo some profits. There is some evidence that PWYW schemes can be more profitable than conventional licensing in some cases,[275] particularly in driving the sales of complementary goods,[276]

272. *See* Christian Schubert, *How To Evaluate Creative Destruction: Reconstructing Schumpeter's Approach*, 37 CAMBRIDGE J. ECON. 227, 240–41 (2013) (arguing that evaluating innovation requires using welfare and preference effects "as an 'input' to a public process of normative reasoning and deliberation").

273. JULIE E. COHEN, CONFIGURING THE NETWORKED SELF: LAW, CODE, AND THE PLAY OF EVERYDAY PRACTICE 103 (2012).

274. *See* Agrawal et al., *supra* note 139, at 75–76.

275. *See* Sana El Harbi et al., *Substituting Piracy with a Pay-What-You-Want Option: Does It Make Sense?*, 37 EUR. J.L. ECON. 277, 294–95 (2014) (finding that an artist's profit from derivatives, including live performances, can increase under PWYW pricing, and that under certain conditions, a PWYW model can be more profitable than a conventional album release).

276. *See* Ju-Young Kim et al., *Kish: Where Customers Pay as* They *Wish*, 8 REV. MARKETING SCI. 1, 4–5 (2010) (discussing the financial benefits of PWYW revenues and

but this may depend on the producer's stage in their career lifecycle.[277] It is safer to assume, for the moment, that commons-based schemes do in fact impose a greater cost on producers compared to conventional copyright licensing. The relevant question is how that cost is distributed.

Conventional publishing models in the creative industries are not particularly fair for artists, even the small percentage who manage to develop successful audiences and professional contracts.[278] Artists in the creative industries are characterized by a strong A-list/B-list phenomenon, where small differences in perceived talent result in huge differences in rewards. Success in the creative industries is a lottery.[279] In order to mitigate the inherent risks of creative production, copyright aggregates money and power in publishers, allowing them to weather the inherent uncertainty by offsetting many flops against the occasional hit. As a result of this power asymmetry between publishers and artists, copyright over-compensates the tiny proportion of superstars and generally fails to provide adequate rewards to everyone else.[280]

Commons-based systems may actually fare significantly better for authors on fairness grounds. Whether the distribution of revenue is more or less fair in commons-based systems than in conventional copyright models really depends upon the ability of commons-based systems to support a larger range of producers than the copyright industries currently do. In all likelihood, revenue in voluntary payment systems will also be skewed towards popular producers.[281] If this is the case, commons-based systems may be no less fair than existing systems. Potentially, however, voluntary payment schemes may include an in-built, self-limiting trend that limits monopoly rents to su-

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complementary goods sales in a restaurant setting). *But see* Schmidt et al., *supra* note 91, at 2–3 (noting that "PWYW need not maximize market penetration after all").

277. *See* Tobias Regner et al., *An Artist Life Cycle Model for Digital Media Content: Strategies for the Light Web and the Dark Web*, 8 ELECTRONIC COM. RES. APPLICATIONS 334, 339–40 (2009) (arguing that the benefits of super-distribution, variable pricing, and voluntary contributions are more likely to suit an artist in the early stages of their career, whereas traditional copyright business models are likely to provide greater revenues to established artists).

278. *See generally* Albini, *supra* note 135 (discussing the fact that few professional recording artists are able to profit from even highly successful recording contracts).

279. *See* RICHARD E. CAVES, CREATIVE INDUSTRIES: CONTRACTS BETWEEN ART AND COMMERCE 57 (2000) (discussing the "lottery prize phenomenon" wherein artists continue to produce creative works despite uncertain reception in the market).

280. RUTH TOWSE, CREATIVITY, INCENTIVE AND REWARD: AN ECONOMIC ANALYSIS OF COPYRIGHT AND CULTURE IN THE INFORMATION AGE 133–36 (2001); Suzor, *supra* note 157, at 306–14, 324.

281. Ajay K. Agrawal et al., *The Geography of Crowdfunding* 7 (Nat'l Bureau Econ. Res., Working Paper No. 16820, Feb. 2011) (finding that on Sellaband, a music crowdfunding site, 0.7% of artists raised more than 73% of all funds raised between 2006 and 2009); Agrawal, *supra* note 139, at 66 (reporting unpublished work that revealed similar outcomes on Kickstarter, "even conditioning the sample on successfully funded projects").

perstars. In an openly licensed model, participants are asked to support the costs of production because it is the right thing to do; it may be that extremely successful producers will not be able to convince their audience that they deserve the same windfall profits that they receive under conventional licensing regimes. Of course, extremely popular producers are still likely to receive windfall profits through cross-subsidies and potentially through reciprocity norms — Amanda Palmer's experience demonstrates that her fans were willing to award her much more than the $100,000 she originally asked for.[282] It is at least conceivable, however, that commons-based systems might reduce monopoly rents disproportionately amongst superstars. Conceivably, if consumers spend less on superstars, there might also be more money available to support a more diverse range of producers. Reduced rents also means that publishers have less incentive to invest heavily in wasteful marketing races that crowd out marginal works.[283]

If voluntary payment mechanisms were able to reduce some of the monopoly rents of producers and some of the power of publisher intermediaries, this would almost certainly be a good result.[284] If this is the case, the average artist may benefit, even though the most successful artists would suffer. Any system that evens out the highly skewed revenue curve of artists, even to a small extent, is likely to be better on distributional grounds.[285] If, on the other hand, commons-based crowdfunding does not substantially reduce rents, then these systems are likely to be neutral at worst on fairness grounds. Of course, if voluntary payment mechanisms are even more skewed in favor of superstars, then the average artist will be worse off.

b. Distributional Effects on the Public

Importantly, artists and producers are not the only parties who matter in a fairness calculus. If we start from the Rawlsian proposition

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282. Cheredar, *supra* note 173.

283. *See, e.g.*, Mark S. Nadel, *How Current Copyright Law Discourages Creative Output: The Overlooked Impact of Marketing*, 19 BERKELEY TECH. L.J. 785, 801–03 (2004) (arguing that the lottery rewards of mass-market cultural production encourages wasteful spending on marketing, which in turn leads to the lower viability of marginal works).

284. *See* Jessica Litman, *supra* note 46, at 20 ("Some erosion in the position of distributors under copyright is probably both natural and desirable.").

285. David Throsby, *Preferred Work Patterns of Creative Artists*, 31 J. ECON. FIN. 395, 396–98 (2007) (reporting data that suggests that artists who are more financially secure are more likely to achieve a "preferred time allocation" for creative work); Jorge Alonso & Richard Watt, *Efficient Distribution of Copyright Income*, *in* THE ECONOMICS OF COPYRIGHT: DEVELOPMENTS IN RESEARCH AND ANALYSIS 81, 93 (Wendy J. Gordon & Richard Watt eds., 2003) (arguing that it is logical to assume that creators are more risk-averse than publishers); *cf.* Diane Leenheer Zimmerman, *Copyrights as Incentives: Did We Just Imagine That?*, 12 THEORETICAL INQ. L. 29, 41–42 (2011) (noting that copyright protects "those [artists] who are willing to gamble their all for the chance . . . to grab the proverbial pot of gold").

that justice requires a fair distribution of resources,[286] the distributional effect on the most disadvantaged people in society is of most importance. Compared against openly licensed goods, monopoly pricing in conventional copyright systems makes disadvantaged people worse off. The availability of Wikipedia, for example, means that everyone can access a large body of knowledge for free. If the only encyclopedias available were subscription-based, the poorest members of society would have to give up some other source of welfare to access that knowledge.[287]

These distributional effects are particularly visible in terms of access to information in developing countries. Open access to scholarly resources, for example, makes some of the world's recorded scientific literature available to scholars who could not otherwise afford access.[288] Open educational resources improve access to textbooks and other materials for people in developing countries.[289] Many other cultural goods are often unaffordable for people in developing countries,[290] and greater levels of free access can be extremely important for people who are disadvantaged in the market economy.[291]

This reasoning can be extended to all knowledge and cultural goods. If total welfare (efficiency) is equal, we should prefer the conditions in which information goods are available at or close to their marginal cost of distribution. More generally, if non-exclusive modes of production are feasible, we should only prefer copyright-based models if they lead to such an increase in quality, quantity, diversity, or aggregate welfare that the poorest members of society would be better off despite having to pay for access.[292] Here too, then, we need a better understanding of the long-run effects of commons-based systems of production.

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286. *See generally* JOHN RAWLS, A THEORY OF JUSTICE (1971).

287. BENKLER, *supra* note 40, at 306–07.

288. *See* Leslie Chan et al., *Open Access Archiving: The Fast Track To Building Research Capacity in Developing Countries*, SCIDEV.NET (Nov. 2, 2005), http://www.scidev.net/global/communication/feature/open-access-archiving-the-fast-track-to-building-r.html.

289. *See* Susan D'Antoni, *Open Educational Resources: Reviewing Initiatives and Issues*, 24 OPEN LEARNING: J. OPEN, DISTANCE E-LEARNING 3, 3, 7 (2009).

290. *See generally* MEDIA PIRACY IN EMERGING ECONOMIES, *supra* note 154.

291. *See, e.g.*, Shuddhabrata Sengupta, *A Letter to the Commons*, *in* IN THE SHADE OF THE COMMONS: TOWARDS A CULTURE OF OPEN NETWORKS 19, 20 (Lipika Bansal et al. eds., 2006) (discussing the importance of access to knowledge and cultural goods for people unable to bargain for access).

292. *See* BENKLER, *supra* note 40, at 307. One potential problem with commons-based distribution models is the loss of selection-aiding information provided by the branding and marketing enabled by large distributors. For a discussion of alternate, decentralized selection processes that may help in commons-based systems and the role that non-rightsholder intermediaries can perform, see Dan Hunter & F. Gregory Lastowka, *Amateur-to-Amateur*, 46 WM. & MARY L. REV. 951, 994–98 (2004).

c. Capabilities for Human Flourishing

Focusing on welfare alone is not sufficient for copyright policy. Access to knowledge and culture is important because it is an important part of living a good life.[293] Human flourishing requires that people have a minimum threshold of capability to exercise the freedoms required for a life of dignity and well-being.[294] The capability to access and participate in culture is a fundamental component of flourishing in a social life.[295] It is also important for development: innovation, creativity, and growth are dependent on the ability of people to learn from and improve on existing works.[296] Fundamentally, access to knowledge and cultural goods is how we learn, and playing in the flow of culture is how we grow.[297]

All else being equal, cultural works that are free to be shared, used and improved are much more conducive to human flourishing than copyrighted works released under conventional consumer licenses. We have already seen that free cultural and academic works enable people in disadvantaged groups to participate in education, culture, and economic society to an extent not otherwise possible. When copyright imposes a barrier to access to knowledge and culture, it limits the capacity of people to participate in society.

Beyond the threshold of a basic level of access to participate in society, the impact of greater access is exponential rather than linear. Creativity and learning are reliant not just on deliberate experimentation, but on "serendipitous access and unexpected juxtapositions."[298] The value of any piece of information increases with the connections that are available to other pieces of information.[299] A model of cultural abundance, with the legal ability to consume, borrow, adapt, remix, and re-express cultural works, helps to promote creativity, learning,

293. *See* Suzor, *supra* note 157, at 314–22.

294. *See* NUSSBAUM, *supra* note 255, at 36; SEN, *supra* note 255.

295. *See* MADHAVI SUNDER, FROM GOODS TO A GOOD LIFE: INTELLECTUAL PROPERTY AND GLOBAL JUSTICE, 64–76 (2012); COHEN, *supra* note 273, at 50–57 (arguing that "the play of everyday practice is the means by which human beings flourish").

296. *See* HUGH BREAKEY, INTELLECTUAL LIBERTY: NATURAL RIGHTS AND INTELLECTUAL PROPERTY 55 (2012) ("[T]he flow and progression of science, technology, culture and learning has until now occurred because of people's liberties to copy, learn, critique, refute, synthesize, subtilize and generally bounce off others' ideas."); L. RAY PATTERSON & STANLEY W. LINDBERG, THE NATURE OF COPYRIGHT: A LAW OF USERS' RIGHTS 50 (1991); Margaret Chon, *Intellectual Property "from Below": Copyright and Capability for Education*, 40 U.C. DAVIS L. REV. 803, 846 (2007).

297. Cohen, *supra* note 256, at 1168, 1192 (arguing that the "play of culture" furthers progress by fostering diversity and destabilization in "settled modes of knowing").

298. COHEN, *supra* note 273273, at 80.

299. *See generally* PAUL ORMEROD, POSITIVE LINKING: HOW NETWORKS CAN REVOLUTIONIZE THE WORLD (2012).

and cultural play to an extent that a model based on exclusivity and costly access never can.[300]

For these reasons, all else being equal, systems that enable greater abundance and greater flow of knowledge and culture are likely to align more with human flourishing than other systems. The difficulty remains that all else is not equal — there are likely to be differences in the volume and types of production that can be supported by different systems. Understanding what those differences are will be crucial for policy-making.

C. A Better Consequentialism for Complex Systems

On each of the three metrics considered here — efficiency, fairness, and flourishing — there is a plausible hypothesis that commons-based systems of production might result in better outcomes than conventional copyright systems. For each, however, the analysis ultimately depends upon an evaluation of how these systems might interact with other modalities of production and an evaluation of their likely effects on levels and qualities of output in the creative industries as a whole. In order to come to any view about the desirability of encouraging commons-based systems of productions, we need a better understanding of the following: the types of content and industries that are amenable to voluntary payment systems; the likely distribution of revenues amongst producers; the impact of greater levels of access on future creators; the likely shifts in incentives; the effective limits on voluntary contributions; and the effects on publisher intermediaries.

The analysis that is needed to test this hypothesis requires a new methodological approach. The conventional tools of economic welfare analysis familiar to copyright have so far been unable to model long-run effects of any changes in copyright law, public policy, or industry practice.[301] The essential problem is that the welfare effects of any given experiment or system cannot be assessed individually, but must instead be understood in the context of their effect on other actors.[302] The creative industries are complex systems,[303] in which

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300. *See* Suzor, *supra* note 157, at 318. *See generally* LAWRENCE LESSIG, THE FUTURE OF IDEAS: THE FATE OF THE COMMONS IN A CONNECTED WORLD (2001); BOYLE, *supra* note 29.

301. *See* Christian Handke, *A Taxonomy of Empirical Research on Copyright — How Do We Inform Policy?*, 9 REV. ECON. RES. ON COPYRIGHT ISSUES 47, 50–56 (2012); *cf.* NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS., COPYRIGHT IN THE DIGITAL ERA: BUILDING EVIDENCE FOR POLICY 33 (Stephen A. Merrill & William J. Raduchel eds., 2013); Towse, *supra* note 259, at 109–13; Sacha Wunsch-Vincent, *The Economics of Copyright and the Internet: Moving to an Empirical Assessment Relevant in the Digital Age* 10–14 (WIPO, Econ. Res. Working Paper No. 9, 2013).

302. *See* Schubert, *supra* note 272, at 240–43.

303. *See* Jason Potts et al., *Social Network Markets: A New Definition of the Creative Industries*, 32 J. CULTURAL ECON. 167, 182 (2008).

information is both an input and an output. In these complex systems, a heterogeneous but not well-mixed set of autonomous actors with diverse motivations and bounded rationality interact within a social network.[304] Because "everything is connected to everything else"[305] and tightly coupled actions are governed by vicious or virtuous feedback circles, different content production systems will interact in counterintuitive ways.

The biggest challenge lies in understanding the dynamic effects of different systems of cultural production. In order to understand the implications of any potential change to copyright, a new approach is required: one that can focus on the connection between actors (individuals and corporations) rather than the actors' individual incentives familiar to neoclassical economic analyses of copyright.[306] As a starting point, since information is an input as well as an output in the creative industries, we might assume that lowering input costs through commons models is likely to enable more reuse and more aggregate production. Importantly, greater flow of information is also likely to enable greater innovation, which often involves the deliberate and unexpected combination of multiple sources of information.[307] Similarly, since creativity is always inspired by existing culture, enabling greater flow of information can lead to a more vibrant creative culture by creating new opportunities for serendipitous exposure not possible with higher transaction and licensing costs.[308] But we have no evidence and very little theory about how increased use of commons-based production systems might interact with more conventional systems for coordinating and funding investment in cultural production. Any changes in public policy and industry practice are likely to increase production in some systems and depress it in others, but the direction or magnitude of any of these effects is currently unknown. Given the gains that might be possible, this is a key and pressing area for new research.

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304. *See* Joshua M. Epstein, *Agent-Based Computational Models and Generative Social Science*, 4 COMPLEXITY 41, 41–42 (1999).

305. BARRY COMMONER, THE CLOSING CIRCLE: NATURE, MAN, AND TECHNOLOGY 33 (1971).

306. *See* John Foster, *From Simplistic to Complex Systems in Economics*, 29 CAMBRIDGE J. ECON. 873, 884–86 (2005) (discussing the need to move beyond neoclassical optimization and focus on connections between elements in complex systems).

307. *See* Peter F. Drucker, *The Discipline of Innovation*, 63 HARV. BUS. REV. 67, 67–68 (1985) (discussing the sources of innovation, including "unexpected occurrences" and "new knowledge"); Jeanne C. Fromer, *A Psychology of Intellectual Property*, 104 NW. U. L. REV. 1441, 1462–63 (2010) (explaining that "creativity is hard work"); Rebecca Tushnet, *Copy This Essay: How Fair Use Doctrine Harms Free Speech and How Copying Serves It*, 114 YALE L.J. 535, 541 (2004) (discussing sources of inspiration for creative work); Silbey, *supra* note 25, at 2102–06 (explaining the role of serendipity in creativity).

308. *See, e.g.*, Cohen, *supra* note 256, at 1190–92 (discussing the "play of culture").

VI. CONCLUSION

The assumption at the core of copyright — that users are self-interested, wealth-maximizing free-riders — is untenable. Humans are responsive to incentives, but we are also motivated by a desire to reciprocate, a respect for social conceptions of fairness, a concern for the well-being of others, and a commitment to personal ethics. These diverse motivations lead individuals to actively reciprocate kindness and support the producers of creative works in circumstances where conventional copyright theory would not expect.

In recent decades, the failure of copyright industries to take fairness norms into account has been undermining the normative moral legitimacy of copyright law. The increasingly punitive nature of copyright enforcement, the disconnect between copyright law and morality, and the perceived unfairness with which copyright industries treat both artists and consumers is likely to substantially weaken the motivations of individuals to pay for digital goods. The focus of copyright industries on strengthening copyright, then, is misguided. In order to encourage users not to free-ride, copyright industries should instead ensure that copyright law and practice is fair.

The recognition that reciprocity and fairness norms play an important role in the motivations of people opens up the possibility of structural changes to copyright business models. Through coordination and cooperation, producers and audiences are sometimes able to develop successful systems for funding the production of creative works without the exclusivity that copyright requires. There is good reason to believe that these commons-based voluntary mechanisms might be workable at scale and potentially sustainable across a broad proportion of the creative industries.

To the extent that commons-based systems of cultural production are effective, it is likely that they are also more efficient than conventional copyright models. Commons production limits the costly under-use and under-distribution of information goods that is largely unavoidable under copyright. Because access to knowledge and culture is a fundamental component of a good life, commons models are also likely to be more conducive to helping people flourish.

Ultimately, evaluating both the efficiency and the effect on flourishing of commons models requires a much more detailed understanding of knowledge and cultural commons. First, much depends on the extent to which these systems can be effective and sustainable, about which little is currently known. More research is required to understand the conditions for successful cooperation in information commons. Second, we need a much more sophisticated understanding of the interaction between different systems of production and the effect on total production, types of production, and levels of access. This

work requires a different approach to that which has typically informed copyright theory — one that is sensitive to the complex relationships between actors involved in cultural production.

Undertaking this work is of great importance. New technologies have given rise to a crisis in the traditional foundations of copyright by radically lowering the costs of production and distribution of creative works. This crisis continues to disrupt creative industries, and there are no easy answers about how the law should respond. At a time when so much is at stake in the content, technology, and Internet industries, it is vital that we understand the conditions under which copyright works effectively in order to get the balance right. Identifying the extent to which new systems can deliver better outcomes for both producers and consumers of knowledge and cultural goods could present an extremely important policymaking opportunity.